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J. B. Fuqua's Long-Running Soap Opera

Will Reaganomics Unravel?

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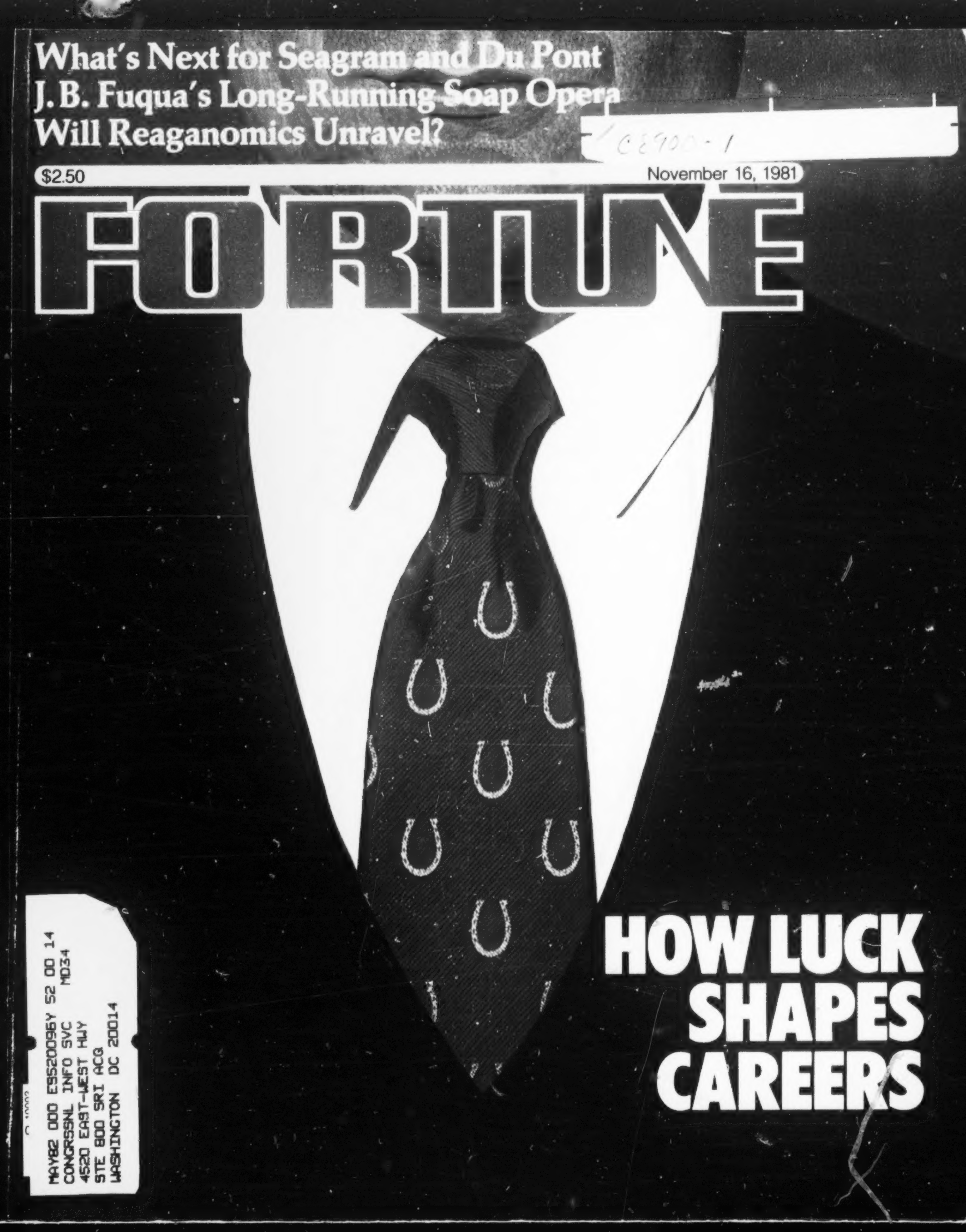

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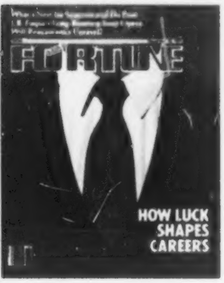
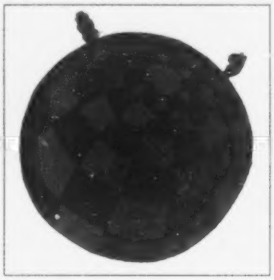


Marvin Mattelson painted the horseshoe-sprinkled executive tie on the cover. An article on the role of luck in shaping careers begins on page 60.

80 Third World

92 St. Louis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POLICY

Reaganizing the Third World

The new U.S. aid strategy is the only one that can work.

by ROBERT LUBAR

The informal proceedings of that extraordinary summit meeting at Cancún were off the record, but they may have borne some resemblance to those sessions in the Oval Office when Ronald Reagan was using his fabled charm to line up congressional votes for his budget and tax cuts. At Cancún the President was pleading the virtues of the international version of Reaganomics, a new U.S. policy for dealing with the poverty and backwardness that afflict the majority of mankind.

As it was unveiled in Administration statements leading up to the summit, global Reaganomics carries a stern message for the poor nations. First, they must rely on individual initiative, private enterprise, and trade to power their economic growth and development; aid from the rich can play only a subordinate, catalytic role. Second, the developing nations must shoulder a good deal of responsibility for their poverty, insofar as their economic policies frustrate the functioning of the market and discourage the emergence of a vigorous private sector. Finally, further aid will be conditioned upon their willingness to change those policies. In the President's words, "Unless a nation puts its economic and financial house in order, no amount of aid will produce progress."

Taking on the establishment

At first hearing, the message got a cool reception, and not just in Third World countries, which are accustomed to lecture others, not to being lectured at themselves. In Europe and the U.S., Reagan was pictured as Scrooge preaching platitudes about self-reliance. The President will have to counter the impression that his policy is just an elaborate cover-up for slashing the U.S. foreign-aid budget. To convince skeptics, he must follow up with words and actions that demonstrate how the policy will work. This job of education and persuasion could prove far tougher than the one Reagan performed in getting his domestic program across, for it represents an even bolder challenge to conventional wisdom.

continued

Research associate: Louis S. Richman

A World Bank affiliate that acts like a venture capitalist, the International Finance Corporation put $9.3 million of seed money into this $300-million fertilizer plant in Aqaba, Jordan, which was built by a multinational consortium of investors. The plant is expected to help the Jordanian economy sprout $200 million in export revenues and 600 new jobs when it goes into full production next year.

Where the market is given a chance to work, the development process has almost invariably taken off at high speed.

World poverty and how to deal with it are not the stuff of ordinary politics. The public is bored by it, and Congress has to be hounded into making decisions about it. That leaves the field of discussion to specialists and aficionados: academics, veterans of the foreign-aid bureaucracy, editorial writers, internationally minded corporate executives—the kind of people you would expect to meet at the World Affairs Council of Philadelphia, where the President, not coincidentally, chose to air his new policy first.

The prevailing view of this "establishment" is that a widening gap between the rich and poor nations threatens to plunge the world economy into crisis. Therefore, the rich nations have a material self-interest as well as a humanitarian obligation to correct the maldistribution of wealth by greatly increasing aid to the poor.

And that may be putting it mildly. The 1980 report of the Brandt Commission may fairly be said to reflect the establishment consensus (the U.S. members were Katharine Graham, chairman of the Washington Post Co., and Peter Peterson, head of Lehman Brothers). It called for "a large-scale transfer of resources to the developing countries" and "a start on some major reforms in the international economic system." It contemplated supranational authorities with power to regulate world commerce and industry, and even to levy taxes. From there it isn't a long jump to the New International Economic Order for which the Third World majority at the United Nations has been agitating since the early 1970s.

The Brandt report might well have set the terms of discussion at Cancún had it not been for the new U.S. policy, which puts things in an entirely different perspective. It sees not a monolithic bloc of humanity condemned to poverty and backwardness by an iniquitous system, but 100-odd nations at different levels of development, each advancing at its own pace. Some have climbed to "newly industrialized" status; some have reached the middle-income class; a number lag behind, their primitive economies able to support a woefully meager standard of living. But all are "developing," which is a dynamic concept; it implies change that can be measured only crudely by such statistics as growth in per capita GNP.

The development process is complex and unpredictable. Its ingredients are familiar—capital, education, technical and managerial skills, favorable culture, availability of natural resources—but their permutations and combinations are always different. Why, for example, did Spanish South America, founded on immense gold treasure, lag behind British North America, which developed out of an inhospitable wilderness? The artificial infusion of any single ingredient cannot guarantee an accelerated rate of development. In the past decade, the Arab states along the Persian Gulf were the beneficiaries of one of the biggest redistributions of wealth in history. They are high in per capita GNP, but they still rank low in development, and it remains to be seen whether they can transform their newfound riches into true progress for their people.

As the experience of Iran demonstrates, governments risk disaster when they intervene in the development process. By trying to force the pace, the Shah's regime strained the bonds of a traditional society, uprooted large sections of the population, and led to the destruction of stability and order. In other instances, overeager leaps into industrialism have resulted in a monstrous misuse of resources, leaving landscapes strewn with abandoned steel mills, idle factories, empty luxury hotels—gloomy monuments to bad judgment and overweening ambition.

Where freedom rings

On the other hand, where the market is given a chance to work its magic, the development process has almost invariably taken off at high speed. Consider the amazing performance of Hong Kong and Singapore, both of which suffer from overpopulation, overcrowding, and lack of natural resources. They owe their success to their enterprising people and to governments that, instead of trying to plan growth themselves, provided the freedom and incentives for individuals to save and invest and apply their talents as traders and manufacturers. President Reagan surely had Hong Kong and Singapore in mind when he pointed out in a recent speech that "the developing countries now growing the fastest in Asia, Africa, and Latin America are the very ones providing more economic freedom for their people—freedom to choose, to own property, to work at a job of their own choice, and to invest in a dream of the future." The private-enterprise approach to development is not just ideological fetishism. It is the only approach that has worked.

Nations on welfare

Yet the notion persists that the Third World's salvation rests on ever larger handouts from the rich nations. Like domestic welfare programs, aid has temporarily relieved distress and suffering, but can anyone name a country whose development was significantly accelerated by it? In fact, more often than not, aid has had adverse effects. It has fostered the illusion that the government *is* the economy and the source of everyone's livelihood; that stifles individual initiative and encourages centralized development planning, whose unresponsiveness to market feedback results in waste. In some cases, aid creates the international equivalent of welfare dependency. Nations get to rely on it to balance their budgets and put off necessary corrective measures, which usually involve the painful reduction of swollen bureaucracies.

These considerations—not just penury—have led the Administration to assign aid a much more constricted role in development strategy. The policy calls for countries well up on the development ladder to be weaned from aid, on the supposition that if an aid project promises to earn an economic return, it can and should be financed by private lenders and investors; if it doesn't have that potential, it ought to be scrapped. Countries at the bottom of the ladder, on the other hand, have economies so primitive that there's no base on which

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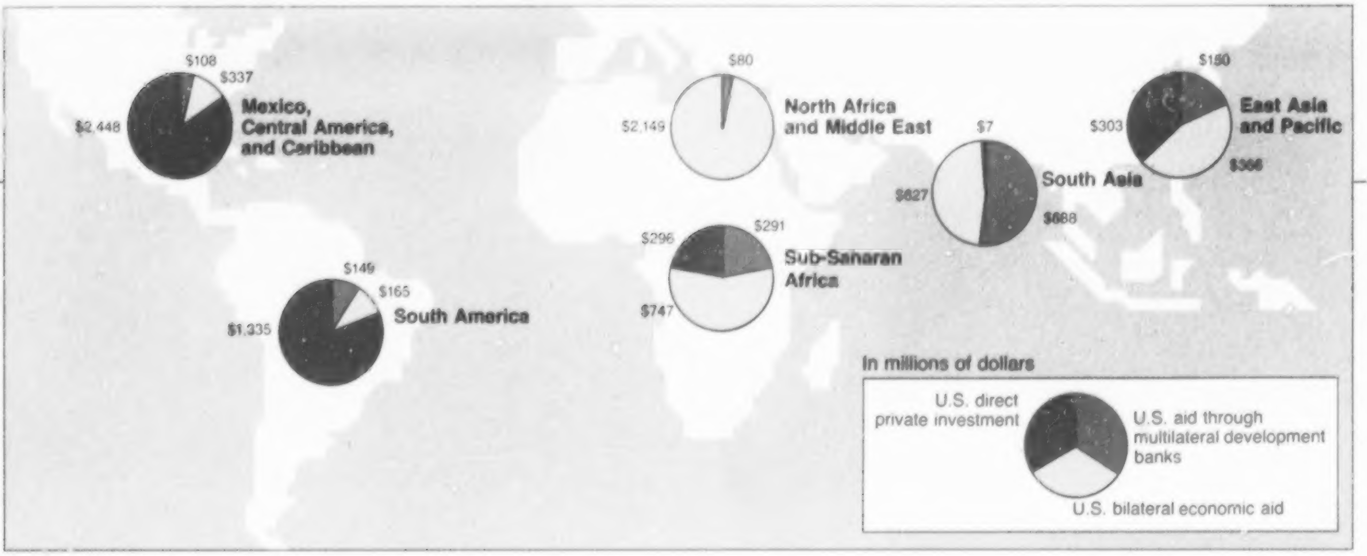
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South America
In millions of dollars
U.S. direct private investment
U.S. aid through multilateral development banks
U.S. bilateral economic aid

The Third World Is a Mixed Bag

Although the developing "South" is described as if it were a monolith, it is neither monolithic nor entirely south of the equator. The World Bank divides developing economies into the six categories shown above. Per capita GNP is only one yardstick; crucial, too, are structural differences–for instance, the degree of industrial or agricultural production and whether a country is an oil exporter or importer. According to the most recent World Bank data, the "middle income" countries range from agricultural Kenya, with per capita GNP of $380, to semi-industrial Spain, whose per capita GNP came to $4,380. Both Indonesia and Bhutan are classified as "low income" countries, but Indonesia, an oil exporter, had a per capita GNP of $370; Bhutan, one of the world's "least developed" countries, barely subsisted on a GNP of $80 per capita. Relative wealth is no guarantee of development. Libya, a capital-surplus oil exporter, grew less than 2% per year through the 1970s. Resource-poor South Korea, a middle-income semi-industrial economy, grew better than 10% annually.

development can take place. They need help in building roads and bridges and seaports, in improving health care, sanitation, and schools, in controlling their population growth, and in modernizing their agriculture. Investment in these areas could eventually yield a sizable economic return, but the payoff is too remote to attract private capital. Official aid is the only available recourse.

The Administration proposes to attach an important condition to that aid: recipient countries must discard policies that obstruct or distort the working of the free market—for example, subsidies, price controls, and manipulation of exchange rates. The immediate point is that the persistence of such policies impedes the effectiveness of aid, but the Reaganites see a chance to drive home the larger moral that the poor nations bear the responsibility for creating an economic environment that is conducive to growth. "We believe," explains Undersecretary of the Treasury Beryl Sprinkel, "that eliminating market obstacles will encourage internal capital formation and capital inflows from abroad."

The new condition will bite particularly hard in agriculture, which is getting the largest share of development aid. In his provocative book, *The Evolution of the International Economic Order*, Princeton economist (and Nobel Prize winner) W. Arthur Lewis says the most important step in development is "to transform the food sector, create an agricultural surplus to feed the urban population, and thereby create the domestic basis for industry and modern services. If we can make this change, we shall automatically have a new economic order."

The politics of food

Unfortunately, many of the poorer countries have moved in the opposite direction. Indonesia, once nearly self-sufficient in rice, is now one of the world's leading importers of it, and Zaire, which used to export food, now uses a quarter of its export earnings to pay for imported food. The main cause of this deterioration was that struggling, insecure governments kept food prices artificially low for the benefit of the urban population, which provided most of their political support. The low prices had the predictable effect of bringing down farm output. Now governments will get U.S. help for their agriculture—irrigation systems, fertilizer, technical advice—only on condition that they keep their hands off prices. (In this respect, it must be conceded, Congress is not setting a very good example in the U.S.)

Prodding the Bank

The U.S. can impose whatever terms it wants on bilateral aid—direct loans or grants to another government—but the Administration also wants the rules applied to the multilateral aid provided by the World Bank, the International Monetary Fund, and the three regional development banks. Its hard-sell diplomacy, conducted in public, blew up a flap just before the joint annual meeting of the Bank and Fund this fall. A series of apparently orchestrated press briefings and interviews, given by high Treasury officials, created

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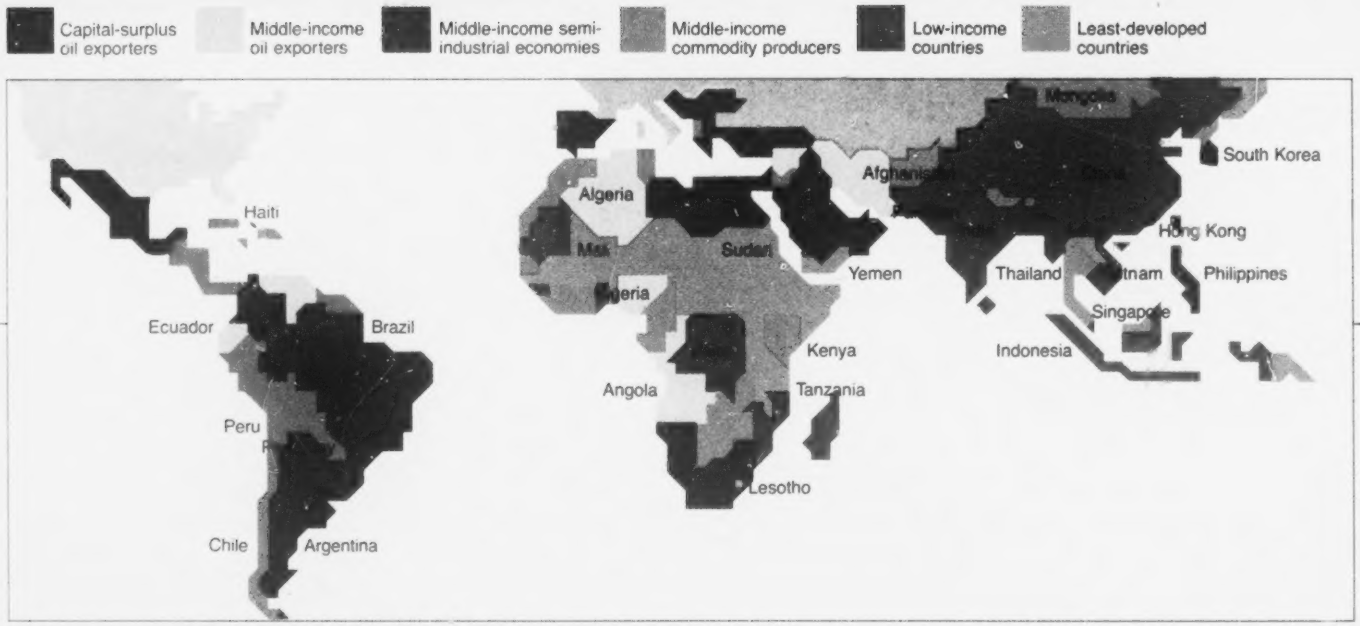

Who Gets How Much of What Kind of Money

The "magic of the marketplace" casts its spell differently throughout the Third World. In Latin America net direct investment by U.S. corporations vastly exceeded official U.S. development aid last year. In contrast, U.S. aid distributed through the multilateral development banks—the World Bank, the Asian Development Bank, and the African Development Bank and Fund—accounted for the lion's share of assistance in sub-Saharan Africa and populous South Asia. The U.S. passed out large dollops of bilateral aid to the Mideast and North Africa mainly because the regions are strategically important rather than because they need development capital. In fact, the net U.S. investment flow to this area was negative because the oil-rich states invested over $2.75 billion more in the U.S. than American investors sent the other way.

the impression that the Administration was hopping mad about the openhanded policies of both the Bank and the Fund and was going to use its influence to rein them in. Officials later maintained that the impression had been unintended and that the media had exaggerated the whole affair.

As it turned out, the heads of the two institutions didn't need to be forcibly converted. The Bank's new president, A. W. Clausen, former chairman of the Bank of America, reaffirmed his devotion to conservative banking and economic principles; no one could mistake him for his predecessor, Robert McNamara, who often seemed eager to assume command of a global war on poverty. As for the managing director of the Fund, Jacques de Larosière, he was already on record as demanding from his clients "not just sound fiscal and monetary policies, but also complementary measures to enlarge the economic capacity of a country, provide better incentives for production, remove bottlenecks, eliminate distortions in cost-price relationships and resource allocation." The words could have come straight out of the White House.

Nevertheless, one gets the impression that the Administration hasn't quite made up its mind about the multilateral lending institutions. It's conceded that U.S. aid dollars are used more efficiently when they join other nations' contributions in common lending pools and that the professional caliber and expertise of the multilateral agencies' staff members are incomparable. But some Reaganites suspect that, however admirable they may be, those international civil servants harbor empire-building tendencies that accord with some Third World ideas.

A global pork barrel?

Others—including many Congressmen—feel the U.S. should keep control of its aid dollars so it can be sure they go to friends, not enemies. They think foreign aid should primarily serve our strategic and national-security objectives. In fact, a substantial part of our $6.5-billion budget for economic aid is being used to reward nations that have been loyal to us or who are deemed particularly vulnerable to Communist aggression. This aid has nothing to do with development—no one talks about requiring El Salvador or Pakistan to adopt free-market policies as a condition for receiving help. By confusing two issues, the Administration risks damaging the credibility of its development policy.

Prejudices against multilateral aid often focus on the International Development Agency (IDA), the World Bank affiliate that lends long-term, charging no interest, to the poorest countries. Every few years, IDA passes its hat around to replenish its lending funds; the sixth replenishment (known as IDA-6) is now in suspense. The Carter Administration pledged the $3.2-billion U.S. share and Reagan promised to honor the commitment, but Congress is likely to stretch out the payments. Since the other countries will scale down their contributions accordingly, the "soft-loan window" isn't going to do much business in the next year or two.

The graduating class

That will be just fine with the Reaganites, who would like to see IDA's lending restricted to the very neediest cases. At present, 53% of it goes to "blend countries" that also qualify for—and have been getting—hard loans from the World Bank proper. In the Administration's opinion, they should be "graduated" out of IDA. Further up on the development scale are a few countries that borrow from the World Bank though they're sound enough to get regular commercial loans; these countries are also candidates for graduation.

continued

The new development policy is going to need a lot of creative interaction between the public and private sectors.

One World Bank affiliate is enjoying new favor in Washington. That's the International Finance Corporation, which might be described as the Bank's venture-capital subsidiary. It not only lends but takes equity positions in fledgling enterprises in developing countries. Its partners are investors in the country itself and may include others drawn from outside. When the business gets on its feet, IFC typically sells its equity interest and uses the proceeds to make new commitments.

Some of the ventures IFC helps finance are brought to it ready-made, but it often puts together projects, furnishes financial advice, seeks out managers and technical people, and does market surveys. In the 25 years since it was established, IFC has committed $4 billion to some 600 ventures, representing a total investment of $18.5 billion.

Lessons in capitalism

In recent years, IFC has broadened its franchise to include helping countries to form capital markets to mobilize and allocate the savings of their own citizens and to attract investment from abroad. Its capital-markets department acts as teacher and adviser on matters ranging from rudimentary accounting to the organization of banking systems and securities markets, the object being to establish the financial framework that is essential to sound development.

Lately, officials at IFC have been glowing over favorable references to the agency in two Reagan speeches—apparently the first time a U.S. President had shown awareness that IFC existed. The mentions were astute and reassuring, because the new Administration development policy is going to need a lot of creative interaction between the public and private sectors, such as IFC represents.

The U.S. and other Western governments can do several things to stimulate private investment and enterprise in the developing world. First and foremost is the conquest of inflation, the biggest drag on growth and development. The uncertainties associated with volatile price movements cause investors to shorten their time horizons and damp their enthusiasm for the long-term commitments that are the meat of economic progress.

Second, the developed nations must keep markets open for the goods Third World countries will be producing as their economies grow bigger and more diverse. Their natural evolution will be into labor-intensive industries such as textiles and shoes, as well as into the processing of their native minerals and other commodities. Threatened industries in the advanced nations clamor for protection. Their demands should be resisted and existing barriers lowered. The long-run benefits from letting comparative advantage work far outweigh the painful adjustments that will have to be made. The U.S., which currently buys about half the Third World's manufactured exports, is in a strong position to exercise leadership on this issue.

Third, government can encourage U.S. corporations to enlarge their direct investment in the Third World—a stake that already comes to $52 billion. In theory, the relationship between multinational corporations and countries desperately anxious to modernize should be one of mutually beneficial partnership. The corporation gains access to new and growing markets, inexpensive labor, and sources of raw materials. The country, in turn, gets an infusion of technology, exposure to managerial expertise, training that builds up a cadre of skilled workers and experienced managers, and efficient use of its resources, since the corporation is responsive to market discipline.

Ritual polemics

In practice, however, the relationship has been rocky. In their favorite U.N. forums, the countries profess to regard the corporation as part of their problem, not its solution. The polemics ritually include diatribes against the multinationals, which are portrayed as plunderers, exploiters, and even (in the celebrated case of the infant-food formulas) baby killers.

Such demagoguery is forgotten down where corporation and country deal with each other at the working level. There the relationship is also adversarial, but it has been getting more mature. In the 1960s, new and inexperienced governments were understandably concerned about the power of huge foreign companies whose annual turnover dwarfed their national budgets. And at first, some multinationals *were* arrogant and patronizing; they *did* throw their weight around.

A new balance of power

But those host governments have been growing more sophisticated, and their bargaining power has increased. As aggressive German and Japanese multinationals have joined the action, the competition has forced U.S. corporations to become more flexible. They have had to take on contractual obligations to export more of their output, to increase the proportion of a product's content made locally, to share ownership with native investors, even to foster the development of new native industries. These obligations are reasonable enough, but corporations feel the need for a legal framework that can protect them against arbitrary and unreasonable demands.

The search for such a framework led to the establishment, in 1975, of the U.N. Commission on Transnational Corporations, which has undertaken to draft a code of conduct. Being dominated by Third World representatives, however, the commission has often been a forum for verbal abuse of the multinationals and has resisted efforts to write limitations on host-government conduct into the code.

The developing countries are more amenable to reason in bilateral discussion. Several of them have signed investment treaties regulating relations with German and Japanese multinationals. The U.S. has been laggard about getting into this kind of diplomacy, largely because the Carter Administration, reflecting the prejudices of its liberal and union supporters, pro-

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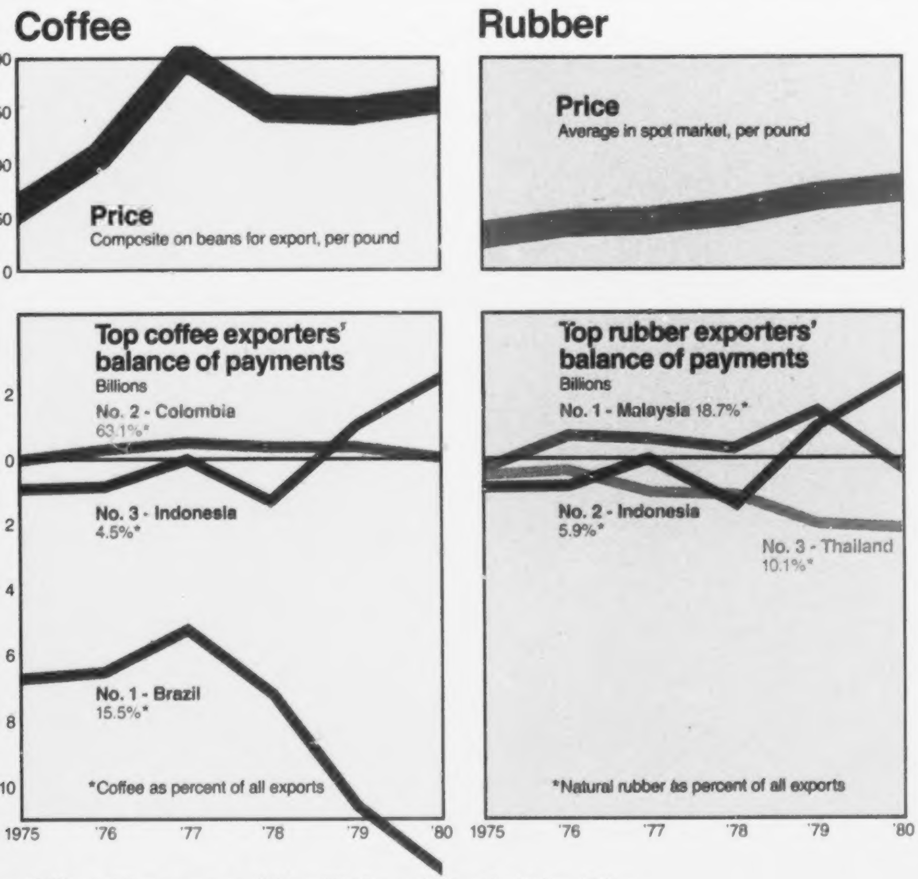

The Commodity Price-Fix Is No Fix

Developing countries frequently contend that gyrations in the prices of the commodities they export throw their international payments out of balance. To correct the problem, they argue for international agreements that would stabilize commodity prices. But the relationship between price movements and international payments balances, as charted above for two commodities and their three major exporters, doesn't support the complaint. Coffee exporters' current-account balances improved when bean prices shot up after the frost of 1975. But even though prices remained fairly high, trouble was brewing for Brazil as fast-rising oil bills siphoned off export earnings. In contrast, Colombia, though more dependent on coffee than Brazil, experienced little change in its payments balance whether bean prices were high or low.

Rubber prices rose gradually through the late Seventies. But as demand fell with the world industrial slump of the past year, Malaysia and Thailand had more difficulty stretching revenues to cover imports. The slump didn't hurt Indonesia, an OPEC oil producer as well as a coffee and rubber exporter; its current-account balance bounced into surplus with the leap in energy prices.

The figures for the percent of exports that coffee and rubber represent are for 1980.

fessed itself neutral about U.S. investment abroad. Now investment treaties are very much "in."

Harvey Bale, the man at the office of the U.S. trade representative in charge of negotiating the treaties, expects the first, with Egypt, to be completed shortly. Among the late Anwar Sadat's less publicized qualities was his sophistication about foreign investment and his eagerness to welcome it. He actually invited U.S. companies to compete with government-owned enterprises. The treaty will stipulate that American subsidiaries get legal treatment equal to that given national businesses, assure prompt and adequate compensation in the event of expropriation, prescribe a process for resolving disputes between government and company, and address the sensitive question of a company's right to repatriate capital and earnings.

Another federal agency whose importance has suddenly been enhanced is the Overseas Private Investment Corporation, which insures U.S. investments in Third World countries against political risks that private insurers won't cover. For ten years it operated in obscurity—Craig Nalen, the agency's new president, calls it "Washington's best-kept secret"—largely because Democratic Congresses kept hemming it in with restrictions, for example, on insuring investments in countries whose per capita GNP exceeded $1,000 (in 1975 dollars).

Now the wraps are coming off. A bill removing most of the legislative inhibitions has just been enacted, and the Administration considers OPIC's expansion vital to its private-sector development strategy. Nalen, whose business career was in marketing, has set in motion "some programs to go out and get business instead of waiting for it to come in over the transom." That means helping to organize investment projects and not merely insuring them. The agency has already been the catalyzer for two fairly large-scale U.S. investments in Jamaica, whose business climate improved dramatically with the election of a conservative government last year. One is an integrated poultry operation and the other is a consortium formed by Kaiser Aluminum, Reynolds, and Anaconda to process bauxite.

A high form of sympathy

It is in many small steps like these, not in dramatic breakthroughs, that the Reagan policy will make its impact. The President is not laying out a plan or program with finite goals that can be expressed in numbers. He is proposing a direction to take—the only direction that can lead to progress. In the nature of things, the progress will be slow, simply because the economic development of nations takes a long time. To recognize that is not to be complacent, or unsympathetic to the impatience of the poor. To raise their hopes with grand schemes for redistributing the world's wealth and power is to practice cruel delusion. ◼

An Ominous Japanese Victory in Chips
Behind Mobil's Maverick Moves
In Partial Defense of David Stockman

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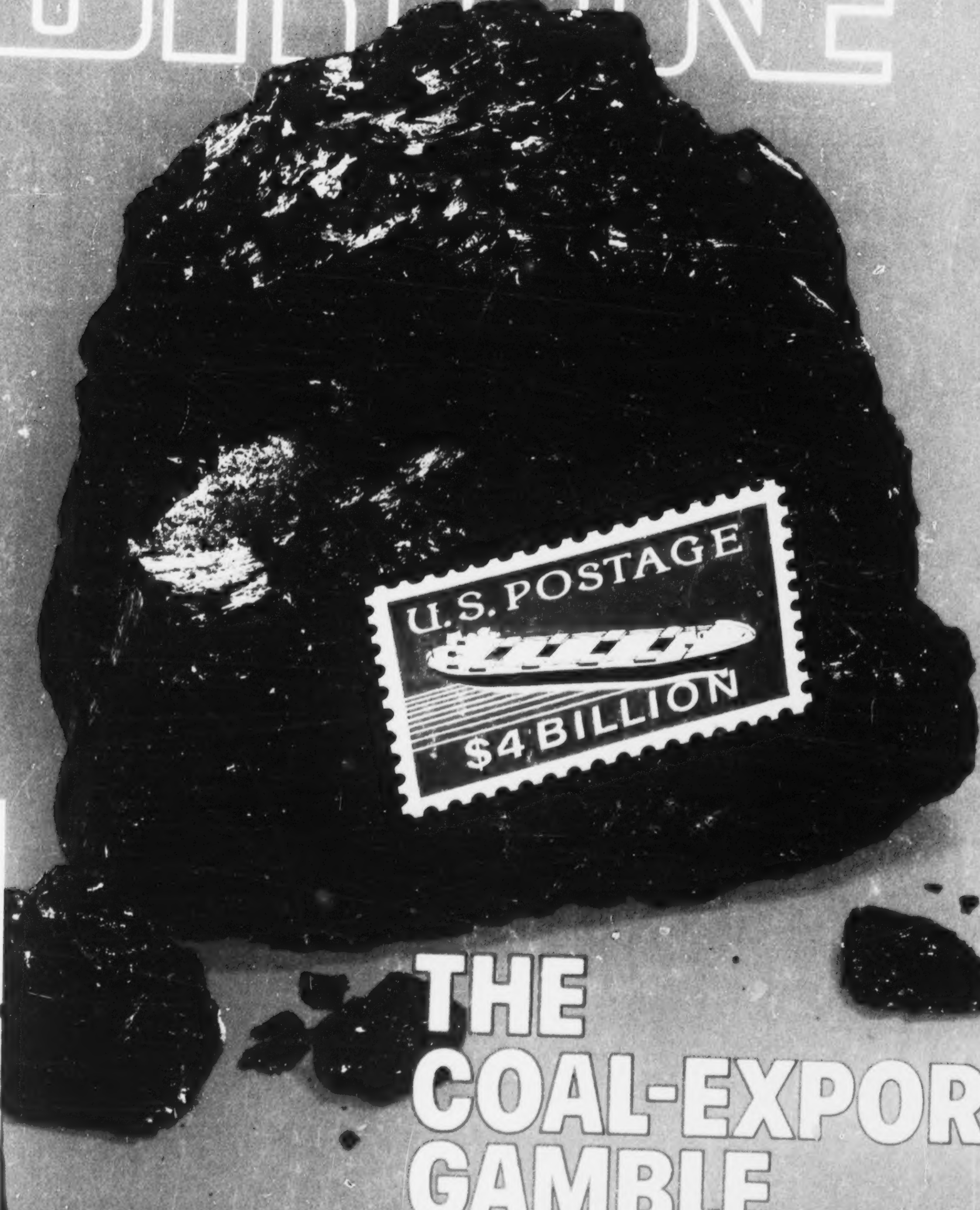

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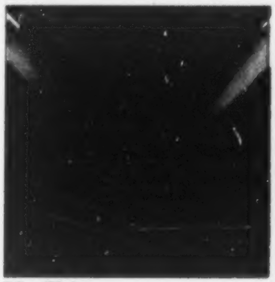
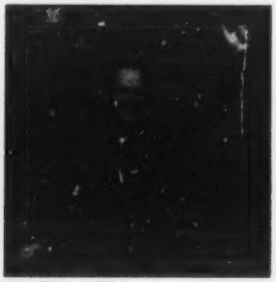
THE COAL EXPORT GAMBLE

Nicholas Fasciano designed the $4-billion stamp on the cover to signify the enormous investment going into new coal terminals at U.S. ports. Frank Spinelli took the photograph. An article on coal fever begins on page 122.



52 Chips



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89 Stockman

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ENERGY

The Coal-Export

Competitors are investing in shipping facilities as if the demand were unlimited.

by DAVID FAIRBANK WHITE

The forecast is stunning: by the year 2000, most experts agree, U.S. shipments of coal abroad will exceed today's colossal exports of grain. Demand has already grown so strong that a frustrated armada of colliers was kept at anchor off Hampton Roads, Virginia, this year, waiting months to load coal for Europe and Asia. Hoping to prosper from the coming trade, U.S. ports are launching their fastest and most dramatic expansion of export capacity ever. Total investment in new coal terminals could reach $4 billion as the ports make changes unparalleled since the container revolution lifted the face of waterfronts.

Coal fever has hit the coasts with such a wallop, in fact, that what was once a critical shortage of loading complexes now shows all the signs of becoming a glut. Across the country, 45 new terminals are being built or planned at 29 harbors on three coasts; if they are all completed, U.S. coal-loading capacity will top 625 million tons per year. This vastly exceeds even the Department of Energy's bullish projections that 250 million tons will be shipped overseas annually by the turn of the century—a 342% increase over today's level. (These export projections and figures on terminal capacity exclude the Canadian trade; Canada will buy some 15 million tons of U.S. coal this year and isn't expected to increase imports much.)

"I'm assuming somebody in these businesses has been doing some market studies and knows what he's doing," says Baltimore's port administrator, W. Gregory Halpin. As aggressive a port developer as any in the nation, Halpin is himself hardly immune to coal fever. Baltimore has 14 million tons of export-terminal capacity and is building 22 million more. "I have only one comment," says Halpin in his modern office high above the harbor crescent. "Ship it through Baltimore."

Grow or die

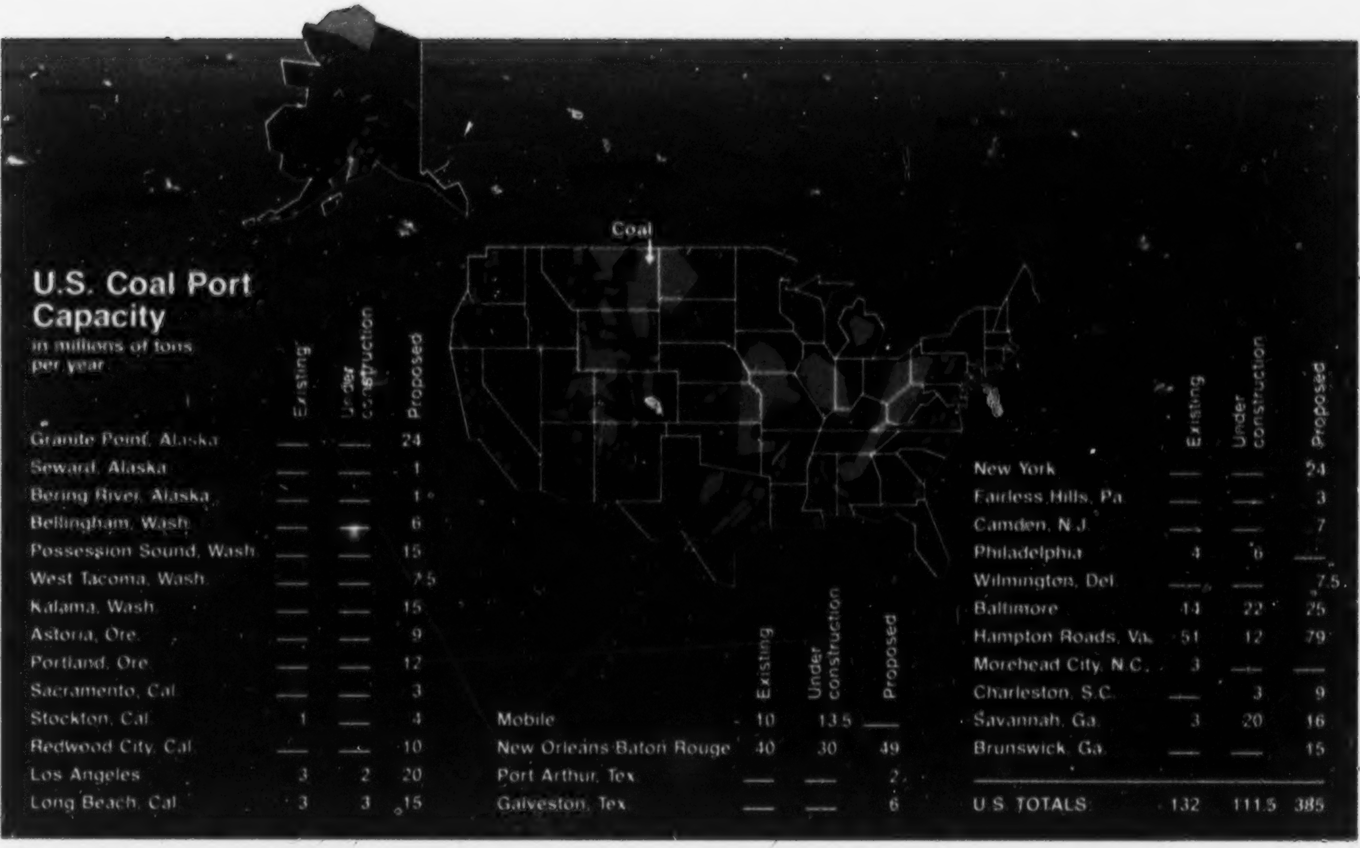
Many proposed terminals will probably never be built, and some on the Mississippi may earn their basic income on domestic traffic. (About 740 million tons of coal will be consumed in the U.S. this year.) But the temptation to overbuild seems irresistible. Coal companies, railroads, barge lines, terminal builders, and local governments all want to profit from the export business.

Each entity has its own special stake in the outcome. For the authorities that run the harbors, coal shipments mean jobs, income for local businesses, tax revenues. For big coal companies, terminals ensure that their product can move. For railroads and barge lines, the race is to protect their traditional livelihoods and to expand their markets. Each competitor is driven by the desire to grow and the fear of dying.

Entering the business for the first time, the Virginia Port Authority, a government body, will put up 25 million tons of capaci-

John McGrail

Occidental Petroleum expects to export 12 million tons of coal a year from this terminal going up in Baltimore. The elevated conveyor will feed coal from hopper cars into the stacking tubes. As coal rises in the tubes, it will spill out the windows into mounds. Conveyors under the holes in the ground will carry it to the loading pier.



U.S. Coal Port Capacity
in millions of tons per year

	Existing	Under construction	Proposed
Granite Point, Alaska	—	—	24
Seward, Alaska	—	—	1
Bering River, Alaska	—	—	1
Bellingham, Wash.	—	—	6
Possession Sound, Wash.	—	—	15
West Tacoma, Wash.	—	—	7.5
Kalama, Wash.	—	—	15
Astoria, Ore.	—	—	9
Portland, Ore.	—	—	12
Sacramento, Cal.	—	—	3
Stockton, Cal.	1	—	4
Redwood City, Cal.	—	—	10
Los Angeles	3	2	20
Long Beach, Cal.	3	3	15

	Existing	Under construction	Proposed
Mobile	10	13.5	—
New Orleans-Baton Rouge	40	30	49
Port Arthur, Tex.	—	—	2
Galveston, Tex.	—	—	6

	Existing	Under construction	Proposed
New York	—	—	24
Fairless Hills, Pa.	—	—	3
Camden, N.J.	—	—	7
Philadelphia	4	6	—
Wilmington, Del.	—	—	7.5
Baltimore	14	22	25
Hampton Roads, Va.	51	12	79
Morehead City, N.C.	3	—	—
Charleston, S.C.	—	3	9
Savannah, Ga.	3	20	16
Brunswick, Ga.	—	—	15
U.S. TOTALS	132	111.5	385

Coal Fever on the Coasts

This FORTUNE survey of ports (orange dots) marks the battlefields in the coming war for coal-export traffic. The East Coast, with 75 million tons per year of loading capacity, has long dominated coal export and is fighting to retain its lead. The principal challenge will come from terminal builders on the Gulf of Mexico, where ports are fed mainly by inland waterways. The West Coast remains a small factor, with only seven million tons of capacity and five million under construction. If all proposed terminals are built, the U.S. will have coal-loading capacity of 628.5 million tons per year—vastly in excess of what will be needed. This survey excludes small terminals under one million tons.

ty at Hampton Roads, one of the biggest projects in the country. In Baltimore, Consolidation Coal, a Conoco subsidiary, has begun building a $100-million terminal that may ultimately handle 12.5 million tons annually from mines in Pennsylvania that the company owns with West German investors. Dravo Corp. is adding 240 barges to its Dravo Mechling fleet plying the inland waterways and, in its capacity as designer and builder, is planning terminals for operators situated from Chesapeake Bay to Puget Sound. On all three coasts, wherever grumbling machinery speeds the black mineral into the holds of waiting colliers, boom times are here and gloom is hard to find.

Crucial in the contest to handle coal traffic is access to the right kind of coal. Hardly a homogeneous product, coal is not even predictably black; most lignites are dark brown. Coal generally falls into two categories. Metallurgical coal is used in steelmaking, and until 1979 almost all U.S. coal exports were of "met" coal. But the projected growth in European and Asian demand is for steam coal, burned mainly by utilities to generate power.

Two important properties are required of steam coal—low sulfur and high energy content. As an antipollution measure, many governments limit sulfur content, often to 1% or less. And the more energy coal produces when burned, the more valuable it is. A buyer must purchase, transport, and handle 300 tons of coal rated at 8,000 BTUs per pound to get the same energy he would derive from 200 tons of 12,000-BTU coal.

A recent national survey of spot prices for steam coal FOB mine gives an idea of the extraordinary range in values. Wyoming and Idaho coal rated at 8,000 BTUs per pound and 1% sulfur recently sold for $7.50 per ton. Illinois coal rated at 10,500 BTUs per pound and 3% sulfur went for $19 per ton. Southern West Virginia and eastern Kentucky coal rated at 12,000 BTUs with a sulfur content of 1% cost $35 per ton. The latter is a hot commodity on any pier in the country.

Where advantage lies

Almost as important as coal grade is transportation cost from mine to port. CSX Corp.'s Chessie line and the Norfolk & Western Railway, which haul Appalachian coal to Hampton Roads, charge $14.72 to $15.37 per ton, depending on the distance from mine to terminal. In addition, both railroads charge for loading the coal aboard ship: 46 cents per ton at the N&W terminal and 74 cents at Chessie's. All together, it costs $15.18 to $16.11 to get a ton of Appalachian coal aboard ship at Hampton Roads. At Baltimore, served by the

continued

Research associate: Brian Dumaine

Three Ways to Load

Christopher R. Harris

Ground Storage

Chessie, export rail rates run as low as $14, loading included, while Mobile, Alabama, another low-cost port, has transportation and loading costs as low as $10.25.

These factors give the principal ports exporting Appalachian coal—Hampton Roads, Baltimore, and Mobile—a commanding advantage over competitors. While western coal is available in vast quantities, it has serious drawbacks as an export commodity. The Northern Great Plains deposits are low in energy content, and high-grade Rocky Mountain coal has to travel 1,000 miles, often across mountain peaks, to the nearest port. By contrast, the greatest reserves of low-sulfur, high-BTU coal in the U.S., some 18.7 billion tons, lie in the majestic Appalachian deposits, beginning far up in Pennsylvania and extending down to Alabama. The eastern railroads can carry this premium-quality coal out of the mountains on an easy downhill run to the sea. Little wonder that the ports with access to this coal are fighting to maintain their edge, while every other port in the country is striving to compete with their economics.

These economics have made Chesapeake Bay the Persian Gulf of coal. Its waters carry over four-fifths of all coal shipped overseas from the U.S., more than the exports of any of America's chief rivals—Poland, Australia, and South Africa. Of the two coal ports on the Chesapeake, Hampton Roads is king. The *Monitor* and *Merrimack* fought the battle of the ironclads there, and coal runs as thick as history. Hampton Roads is expected to send 50 million tons abroad this year, almost two-thirds of all U.S. overseas shipments. Rolf Williams, chairman of Anders Williams & Co. and a prominent shipping agent whose livelihood comes from the vessels that call at Hampton Roads, is keenly watching the scramble for coal traffic. "We are very concerned," says Williams. "We will suffer if other ports get the business."

The battle for traffic

The two most important defensive players at Hampton Roads are the Norfolk & Western Railway and the Chessie line, which carry virtually every pound of coal into the harbor. Both are assured of new terminal capacity, which will prepare Hampton Roads, with its tremendous natural advantages, to handle a monumental increase in traffic. The Chessie has sold parcels of land served by its tracks to the A.T. Massey Coal Co. and to Dominion Terminal Corp., a consortium of Westmoreland Coal, Armco, Ashland Coal, and Utah International; both groups will construct terminals of their own. The tracks of the Chessie and Norfolk & Western will feed into the 25-million-ton-per-year superterminal to be developed by the Virginia Port Authority. "If we can get this facility built," says Port Authority Executive Director J. Robert Bray, "we can put Virginia miners to work."

The proposed Port Authority terminal recently won a fierce battle for traffic with a competing proposal put forward by Parsons Brinckerhoff, an engineering and project-development firm. Pittston, Consolidation, Island Creek, and others have agreed to send their coal through the Port Authority terminal, but Parsons Brinckerhoff insists it will still try to develop a facility of its own. Thus Hampton Roads, which now has an export-loading capacity of just over 50 million tons a year, will be adding at least 55 million tons and perhaps

Big Cargo

The classic method is to dump from hopper cars into a conveyor system, as at the Norfolk & Western Railway's Hampton Roads terminal (below). Storing coal by the carload helps the yard select and mix grades to order, but it ties up rolling stock. Modern ground-storage facilities like the one at International Marine Terminals near New Orleans (left) can be more efficient. Railcars or barges unload coal into piles and immediately return for their next shipment. T. Smith Stevedores uses floating derricks in midstream (right) to transfer coal directly from barges to colliers on the Mississippi.

John McGrail

Classification Yard

Christopher R. Harris

Midstream Transfer

90 million. Shipping agent Williams says the new construction leaves the port confident but wary: "We're afraid of Mobile and New Orleans."

Not to mention the harbor just 150 miles up the bay at Baltimore, which is expanding even faster than Hampton Roads and could lure away traffic. With a 157% increase in coal-export capacity already abuilding, Baltimore will soon be able to ship 36 million tons a year. Beyond that, two groups are talking about adding 25 million tons more. Finally, Baltimore has an ace up its sleeve. It is the only major coal port in the nation that has obtained federal authorization for dredging to deepen its channel. If it can get the money to pay for the job (some $322 million is necessary), Baltimore could be in a commanding position to grab traffic.

Ocean-shipping costs are being radically altered by the proliferation of supercolliers, coal's counterpart of the supertankers that revolutionized oil transport in the Sixties and Seventies. The huge coal ships, which at 1,000 feet are almost as long as the Empire State Building is tall, provide significant economies of scale. While many supercolliers are active in world trade, they cannot take on a full load at U.S. coal ports, because at 100,000 deadweight tons they require a channel depth of about 50 feet. No major U.S. coal port is deeper than 45 feet.

Many ports have applied for the right to deepen their channels, but the approval process is still back in the age of the clipper ship. Approvals routinely take 20 years, though Congress is considering legislation to speed up the action. If Baltimore can deepen its channel to 50 feet, a 110,000-ton supercollier loading there could knock $4 off the current $15-a-ton cost of carrying coal to Amsterdam in a 60,000-ton vessel.

Mobile is after Appalachian coal, too. While the port can't economically handle traffic from the northern mines, southern producers in Tuscaloosa and Birmingham are less than 300 miles away by rail or barge. Gerry Robinson, general traffic manager of the Alabama State Docks Department, surveys the machinery that is sprawled over 100 acres of the impressive McDuffie Island export-coal terminal and pronounces it "a classic example of understated southern elegance." But there's nothing understated about McDuffie or what's happening to it. Backed by a $53-million bond issue, the coal station will more than double capacity, to 23.5 million tons, within two years.

A long way to Kenova

One hundred forty miles west, on the lower Mississippi, New Orleans and other cities are enjoying an unprecedented coal-export boom. The activity may seem surprising since the New Orleans area is not the most economical place from which to ship Appalachian coal. The distances make handling it expensive, even when it is carried to portside by low-cost barge. For example, Dravo estimates that coal from the Kenova area in West Virginia, which can be hauled and loaded at Hampton Roads for around $15 a ton, would cost $20 a ton delivered and loaded at New Orleans. In many cases, the port is better situated to handle lower-quality midwestern coal, which can't be economically shipped to the East Coast and so follows the winding track of the inland waterway system that drains from lower Illinois into the Mississippi and the Gulf.

continued

But despite its handicaps, New Orleans shows promise of becoming a muscular, and perhaps disruptive, competitor. European and Asian customers have been flocking there because they have been getting poor service in the East. During the most serious logjams on Chesapeake Bay, foreign coal buyers descended on the ports, aghast at the disruptions. If a vessel is forced to wait in port, its charterer must pay demurrage, a waiting charge, just as a passenger pays the meter on a taxi stuck in traffic. Demurrage on a 60,000-ton collier can come to $15,000 a day. That's 25 cents a ton of coal for each day's waiting, $1.75 a week, $7.50 a month. Before long, demurrage charges can wipe out the East Coast ports' cost advantages.

Mary Ann Heider, manager of the bulk department at Anders Williams & Co. in the port of Hampton Roads, recalls the reaction of a group of visiting foreign customers during the worst delays. "They did some heavy threatening," she remembers. "They screamed and screamed and screamed." Their message: "We've either got to come to some arrangement or we'll go elsewhere."

Elsewhere, in many cases, has been New Orleans. When export demand picked up on the Mississippi, stevedoring companies began loading coal from barges directly onto colliers in the middle of the Mississippi. Midstreaming, as it's called, is a river technique long used for loading metal ore, grain, and meal. Floating derricks with clamshell buckets sling the coal from feeder barges into the ships' holds. Half a dozen stevedoring companies can load coal in midstream, at $2.75 per ton.

In search of security

Land-terminal operators saw the opportunity to get in on the business and are now looking to expand existing facilities or add new ones. No fewer than eight terminals—totaling nearly 50 million tons of capacity—are being planned along the lower Mississippi. "There's almost a Klondike fever in this whole coal thing," says Executive Port Director Edward S. Reed. The largest coal mover will be Louis H. Meece, president of International Marine Terminals, a husky, silver-haired entrepreneur who gained broad experience in coal-terminal facilities as a barge-company executive. Meece is undertaking an expansion that will nearly quadruple capacity at his terminal south of New Orleans to 15 million tons a year.

The question is whether the demand will continue once Baltimore, Hampton Roads, Mobile, and other ports increase their capacities. Marsden W. Miller Jr., president of Miller Coal Systems of Baton Rouge, Louisiana, returned from a recent European tour thinking that foreign customers would be willing to pay a premium for coal shipped through New Orleans to be certain that an alternative to the eastern ports is available. "As long as you're within a dollar or two," he says, "what the buyer wants is security."

But if terminal operators don't get long-term commitments from foreign customers, they may find their facilities operating way below capacity. Magnolia Coal Co. has broken ground on new facilities without long-term contracts, and U.S. Steel's River & Gulf Transportation Co. is thinking about doing the same. Whether that makes sense will depend on how many terminal operators have similar ideas —and whether overcapacity gives for-

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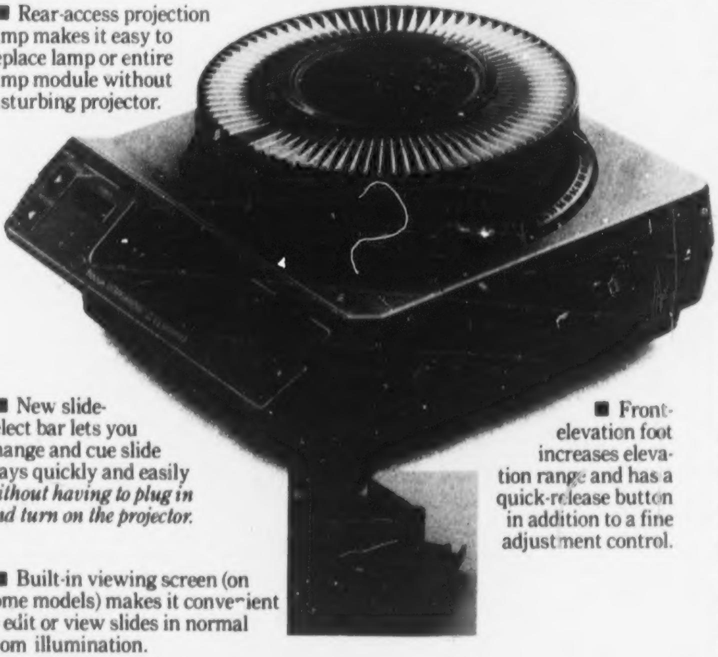

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As if anticipating a future of overcapacity and rate wars, the terminal operators are looking hard at their economics. Meece believes that new eastern coal terminals will be more expensive than present facilities because they will have heavier capital costs to recover. While the loading fee at the N&W terminal is now only 46 cents, he thinks new East Coast terminals will have to charge $3 to $4. That could be enough to destroy their transportation-cost advantage.

Here come the Indians

In answer, eastern terminal developers are negotiating with the N&W and the Chessie to cut the costs of moving coal from mine to port. For example, the Chessie says it is considering a reduction of about $2 a ton in the cost of shipping coal by unit train into Consolidation Coal's new terminal in Baltimore. In answer to *that*, New Orleans operators are continually pressing for lower unit-tow rates on the Mississippi and other rivers. With many rates still being considered, it is too early to tell whose economics may turn out most favorable.

Other competitors could come out of nowhere. D. K. Ludwig, 84, plans to anchor a warehouse ship in Delaware Bay that could receive coal from barges and transfer it to 140,000-ton supercolliers. The Tulalip Indian tribe has retained Dravo to study the feasibility of building a 15-million-ton terminal on tribal land at Possession Sound, Washington. And the Sun Eel Shipping Co. of South Korea has obtained a contract to export coal at Seward, Alaska.

New York's harbor handles hardly any coal today, but that doesn't mean it wouldn't love to. The Port of New York and New Jersey has a marvelous advantage. The 12-mile channel from Ambrose Light to the piers on Staten Island and Port Jersey is much shorter than the entrances to other U.S. coal ports. New York could be dredged to 60 feet for less money than it would take to dredge any other port to 50 feet. A port 60 feet deep could accommodate supercolliers of 200,000 deadweight tons, nearly twice the size of any that has so far entered a U.S. harbor.

Local authorities are now thinking about putting up the $140 million needed to deepen the channel themselves. That would avoid the lengthy federal authorization process. New York officials are sounding out foreign coal buyers to see if they would be interested in contracting for coal that Conrail could haul from Appalachia to the harbor. If they do show interest, New York could build 24 million tons of terminal capacity.

Where chips are piled

With coal terminals being built or planned at 29 harbors, the winners are hard to pick, but it's clear where the betting is heaviest. The chips are piled highest on the old and classic formula: coal from the Appalachian fields moving through Chesapeake Bay. As the market explodes, Hampton Roads will surely find its dominance eroded, but it will still reign as king. Elsewhere, terminals that have not yet broken ground face the risk of being instantaneously superfluous. Those that build without having their traffic ensured by long-term contract face cutthroat competition. Indeed, the coal trade looks like a marvelous opportunity. For the brave.

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Artist Nicholas Fasciano constructed the unglued Pan Am logo on the cover. Dan Kozan took the photograph. An article describing Pan Am's attempts to collect itself begins on page 42.

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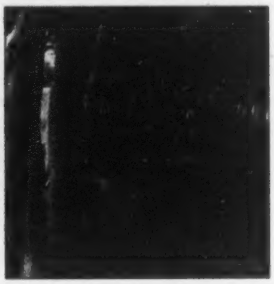
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TRANSFORMATIONS

The Fight for

by CAROL J. LOOMIS

The sight of a corporate chief executive testifying at a congressional hearing is far from unusual these days, but the four who appeared before the Senate Banking Committee one day this fall were an extraordinary gang to be sitting side by side. They were the heads of the nation's largest bank holding company, Citicorp; the largest insurer, Prudential; the largest securities broker, Merrill Lynch; and the largest travel-services company, American Express. The committee's chairman, Senator Jake Garn, had also invited the largest retailer, Sears Roebuck. But Sears begged off, pleading that it was in the middle of tender offers and therefore was not free to warble at a congressional hearing.

Garn had sponsored legislation to loosen the regulatory strings on banks and thrifts, and he wanted to assemble warm-bodied proof of the "increasing competition" that has been making life miserable for these institutions. The five witnesses he went after could provide plenty of evidence. Their companies are all big, complex organizations that reach into multiple corners of the vast and varied industry called "financial services." Diverse in their makeup, these five have one thing in common: they are fierce competitors for the savings dollars that once would have flowed tranquilly to the banks and thrifts.

One of the group, Citicorp, is both prey and predator. Like all banking companies, it is competitively fettered by regulations; it is barred, for example, from buying a full-service brokerage firm. But it has stretched its activities to the limit, while clamoring persistently for deregulation. Many small banks, in contrast, fear deregulation—and Citicorp, which they perceive to be an enterprise that would provide just about every financial service known to man if only it were allowed to.

The other four companies are nonbanks, the segment of the financial-services industry that has the business edge today. Merrill Lynch has been aggressively diversifying for years into such fields as real estate and insurance. Its competitive diadem at the moment, however—an item that has been giving the banks fits—is a brokerage product, the Cash Management Account. The other three companies are all new in the brokerage business. They made their entry this year, doing it by acquisition in a remarkable burst of speed.

Research associate: Elizabeth S. Silverman

Everything in one-third the time

In various ways, then, the five companies exemplify the turbulence shaking the financial-services world. One of the forces at work is the Cash Management Account. Another is the money-market funds, which last month held $175 billion, more than double their total a year ago. That is astounding growth, but developments in the financial-services industry these days regularly exceed expectations. The pace of change has led Irving Leveson, a Hudson Institute economist and expert on the industry, to frame Leveson's Law: "Everything happens in one-third the time."

That was certainly the case in this year's invasions of the securities-brokerage business, a phenomenon that has sharpened the question of where the big financial conglomerates are headed. The companies acquired were all major firms: Prudential got Bache, American Express got Shearson Loeb Rhoades, and Sears is in the process of getting Dean Witter. The transactions have been costly, made at prices ranging up to three times book value (what Amex paid for Shearson). Marveling at these prices in a recent speech, Lewis W. Bernard, a Morgan Stanley executive, speculated on the rationales behind the deals. Are these moves "a profound statement about the competitive environment," he asked, or are they "purely opportunistic"? The probable answer is some of both, with a few additional elements tossed in.

The opportunistic aspects surfaced at

Birk **Beck**

Why banks, brokers, and other contenders are turning themselves into financial supermarkets

Financial Turf

Bache. Early this year, the company was trying to escape the Belzbergs, a Canadian family that had acquired a sizable piece of Bache and appeared to be seeking control. Looking for a rescuer—a white knight—Bache's investment banker tried Prudential, which over the years had been slowly but purposefully moving toward its own version of "one-stop service." The concept, says Prudential's chairman, Robert A. Beck, had not embraced checking accounts, traditional savings deposits, or small loans. But Prudential wanted to enter the securities business and viewed the acquisition of a company specializing in mutual-fund sales as the likeliest route. The purchase of a full-service brokerage firm appears to have received little consideration, in part because Prudential did not see any possibility of a friendly acquisition—the only sort it would consider. Says Beck: "I guess we hadn't thought that somebody was ready to go."

Here, suddenly, was Bache, a major firm, supremely "ready to go." Prudential, ponderous (more than $60 billion in assets) and normally deliberate, struck the $375-million deal in just 13 days. It was, a Bache quipster said, a case of "a 900-pound gorilla going after a banana."

The class of the jungle

Across town in Lower Manhattan, Sanford I. Weill, chairman of Shearson Loeb Rhoades, pondered the Prudential-Bache deal and decided he had just glimpsed the future for bananas. He wanted to pick his gorilla. After some thought, he concluded that American Express, a company whose top executives Weill knew, was the class of the financial-services jungle. Approaching American Express, Weill found its chairman, James D. Robinson III, well disposed toward a brokerage acquisition. The merger, which delivered Shearson shareholders $930 million in American Express stock, was signed in mid-April, one month after Prudential swallowed Bache.

The third acquirer stormed out of the Midwest. Sears Roebuck had been saying for more than two years that it wanted to expand in the financial-services business, in which it was already well represented through insurance, real estate, and savings and loan operations. But Chairman Edward R. Telling had been intent on other matters: the afflictions of Sears' retailing business, a corporate reorganization, the installation of a new management team. He might have kept busy still longer, it may be supposed, had he not noticed that the bananas were going pretty fast.

Six weeks after the Shearson news, the Sears board convened for a special meeting and was treated to a long, detailed presentation on the options in the financial-services field. The first definitive move came in early September, when Sears announced that it would start a money-market fund. The real action popped in October, over four whirlwind days. On October 5, Sears agreed to acquire Coldwell Banker, a big real-estate broker, for $180 million in cash and stock. On October 8, it signed up Dean Witter for about $600 million, also in cash and stock. (Immediately after, no doubt spent by the effort, Ed Telling left on vacation.)

While each of the three acquirers had its own combination of motives, there is also a common theme. All three have been grappling with problems in their traditional businesses and presumably see the

ROBINSON
WRISTON

Georgiana Silk

Robinson **Wriston**

Small banks and brokerage firms might fancy this group picture as a dart board. Lined up at a recent Senate hearing on bank deregulation are the chief executives of four financial-services giants: Roger E. Birk of Merrill Lynch, Robert A. Beck of Prudential, James D. Robinson III of American Express, and Walter B. Wriston of Citicorp. Commenting pointedly on the tendency of his three companions to poach on Citicorp's business, Wriston referred to the group as "all of us bankers, here together."

Letting his imagination run, a Merrill Lynch executive predicted the firm's money-market fund might grow to $500 million. The total recently: $36 billion.

brokerage industry, which has been prosperous lately, as an expanse of greener grass. American Express's traveler's checks and charge cards have met intensified competition, notably from Visa. Sales of life insurance, Prudential's main product, have suffered because of inflation. Sears has the most visible burden of the three, a retailing business fallen into disrepair. Sears' motivations just might resemble those of William S. Woodside, chairman of American Can, who explained recently why his company, a tin bender at heart, had moved to buy an insurance company, Associated Madison: "We got tired of bailing out this leaky boat and decided the smart thing to do was to go out and build a new boat."

Campaigning for regicide

The special attraction of the brokerage business these days is its capacity for meeting the desires of the saver, who has responded to inflation by hot pursuit of a higher return on his money. Brokers, mutual-fund management companies, and other sponsors have accommodated him through money-market funds, which have thrived because they offer both liquidity and a market rate of interest. Banks and thrifts, partly because of interest-rate ceilings imposed on them by Regulation Q, cannot match that combination, so they have been the major losers in the money-market commotion.

Legislation passed in 1980 requires the elimination of Reg Q by 1986, and permits bank regulators to kill it off more quickly if they see fit. Many big-city bankers, among them Citicorp Chairman Walter B. Wriston, have campaigned for immediate regicide. But many small banks, despite the assaults of the money-market funds, still hold large quantities of low-cost deposits and devoutly do not wish to see the interest ceilings on these raised. In some cases, their concern is solvency; in all cases, it is profits. The solvency worries are shared by the regulators, so Reg Q lives on. The banks and thrifts it supposedly protects are damned by the money-market funds if they don't pay more for deposits and damned by economics if they do. The one thing these institutions know for sure is that they detest the money-market funds.

Among the purveyors of the detestable are Dean Witter, Shearson, and Bache; their money-market funds hold about $25 billion in assets. In a league by itself is Merrill Lynch. When the company started its Ready Assets fund in 1975, an executive told Chairman Donald T. Regan (now Secretary of the Treasury) that the fund would probably break even "if we ever get to $100 million." The executive, Dakin B. Ferris, then let his imagination run riot: "We might even get to $500 million someday." Ferris will never make it as a forecaster: In November, Ready Assets and three other Merrill Lynch money-market funds totaled $36 billion.

One of these funds, the CMA Money Trust, is a creature of that high-riding, controversy-laden innovation, the Cash Management Account. Open to customers who put up at least $20,000 in cash or securities, a CMA is powerfully close to a bank account. (See "Merrill Lynch Quacks Like a Bank," FORTUNE, October 20, 1980.) A customer can write checks against his account and each month gets a bank-like statement reporting all his transactions. He may take out margin loans against the securities in his account. If he is instead blessed with cash, it will be swept automatically into the CMA Money Trust, there to earn market rates of interest. The CMA, introduced by Merrill Lynch in 1977 and only now becoming available in all 50 states, is enormously appealing to customers—the best account-getter ever to come along in the brokerage business. In November, heralding the achievement with a press release, Merrill Lynch hit the 500,000 mark in CMA accounts.

Since its retailing operations soured, Sears Roebuck has tried increasingly to pass itself off as a financial conglomerate. Chairman Edward Telling's recent acquisitions should make that easier to do.

Michael Weinstein

That is about 500,000 more than the rest of Wall Street can claim, since Merrill Lynch's competitors initially dismissed the CMA as unimportant and only belatedly began racing to catch up. Dean Witter, having built the elaborate computer programs required, just recently rolled out a CMA-type product. Shearson and Bache, well before they were acquired by American Express and Prudential, announced that they would get into the business as fast as possible. Their entrance is expected early in 1982.

The CMA quacks like a loser

Banks that envy Merrill Lynch's CMA business may find consolation in the thought that it is probably not profitable. This proposition may seem strange, since the CMA is a copious generator of revenues. They include account and management fees, interest earned on margin borrowings, commissions earned on trades generated in the accounts, and money that Merrill Lynch makes (or saves) from the use of customers' cash balances during their brief periods of floating. The CMA also creates side benefits. By its appeal it discourages customers from taking their business to discounters, and it chains account executives to the firm since they cannot expect to take CMA-happy customers with them if they leave.

But supplying the product chews up money, which goes for people, computer systems, and a variety of processing and statement costs. The costs quite probably exceed the revenues, a thought fortified by Merrill Lynch's reluctance to say straight out that the product makes money.

One Merrill Lynch officer displaying re-

continued

What They Get

(All figures in millions of dollars)

	AMERICAN EXPRESS	CITICORP	Merrill Lynch	Prudential	Sears
REVENUES	7,000	17,300	3,800	13,200	27,700
NET INCOME	510	420	200	not comparable	630

What They've Got

	AMERICAN EXPRESS	CITICORP	Merrill Lynch	Prudential	Sears
Assets	23,700	121,700	15,700	67,500	32,700
Customers' deposits	5,700	74,300	700	—	2,300
Customers' credit balances	500	—	900	250	200
Money-market funds	10,700	—	31,000	4,000	9,000
Commercial loans	3,600	56,300	330	34,260	—
Consumer loans	1,000	17,400	3,000	3,520	4,250

What They Do

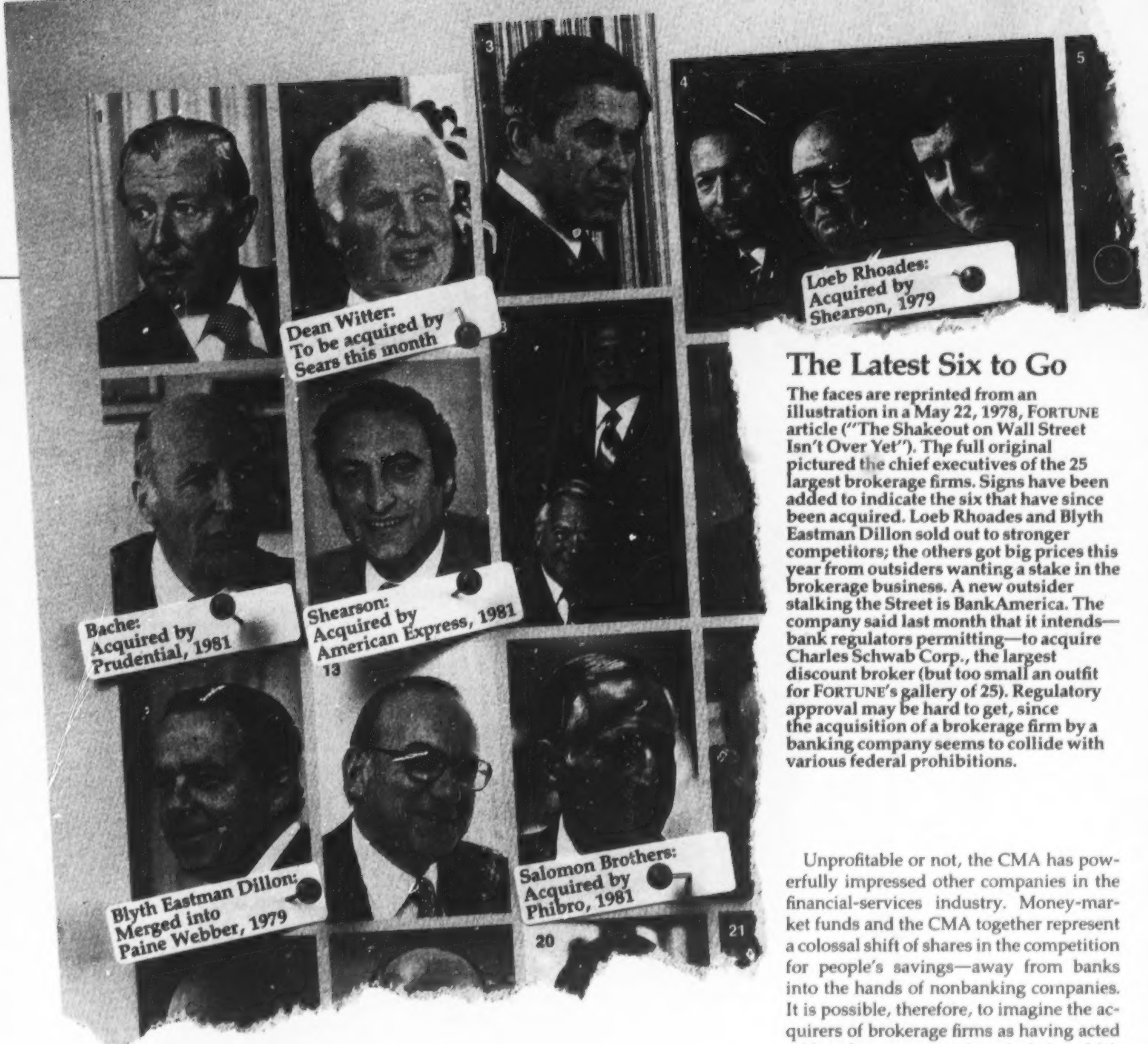
	AMERICAN EXPRESS	CITICORP	Merrill Lynch	Prudential	Sears
Securities brokerage	✓		✓	✓	✓
Securities trading	✓	✓	✓	✓	✓
Cash-management services			✓		✓
Investment management	✓	✓	✓	✓	✓
Commodities brokerage	✓		✓	✓	✓
U.S. corporate underwriting	✓		✓	✓	✓
International corporate underwriting	✓	✓	✓	✓	✓
U.S. commercial banking		✓			
International commercial banking	✓	✓	✓		
Savings and loan operations					✓
Small-loan offices		✓			✓
Credit cards, charge cards	✓	✓			✓
Traveler's checks	✓	✓			
Foreign-exchange trading	✓	✓	✓	✓	✓
Leasing	✓	✓	✓	✓	
Data-processing services	✓	✓	✓		
Property and casualty insurance	✓			✓	✓
Life insurance, health insurance	✓		✓	✓	✓
Mortgage insurance					✓
Mortgage banking	✓	✓	✓		✓
Real-estate development				✓	✓
Commercial real-estate brokerage			✓		✓
Residential real-estate brokerage			✓		✓
Executive-relocation services			✓		✓

The Score on the Big Five

In the sprawling financial-services industry, you can't tell who's what without a scorecard. The revenues and net-income figures at the top apply to the 12 months that ended last September. For all but one of the crowd, these figures include the results of companies acquired, or being acquired, in 1981. Sears' figures, for example, include Dean Witter and Coldwell Banker. The exception is Prudential, which does not consolidate the operations of subsidiaries, including Bache, its newly acquired brokerage. Prudential is exceptional in another way too: as a mutual company, it lacks a net-income figure; the closest thing it has to a profit, "net gain from operations," is not comparable to the profits of the other four companies.

For the rows of figures summing up "What They've Got," Prudential did supply FORTUNE with consolidated data. These rows reflect balance-sheet figures as of September 30; since then the money-market funds have ballooned some more. These funds, together with customers' deposits and credit balances, represent savings and other dollars entrusted to the five companies. American Express and Merrill Lynch get deposits through the foreign banks they own, Sears through savings and loan operations. Consumer loans include margin loans (estimated in most cases).

As the "What They Do" listing shows, the five companies are broadly in competition with each other but also have quite different profiles. Sears is the most ubiquitous of the five, earning check marks in 19 out of the 24 activities.



The Latest Six to Go

The faces are reprinted from an illustration in a May 22, 1978, FORTUNE article ("The Shakeout on Wall Street Isn't Over Yet"). The full original pictured the chief executives of the 25 largest brokerage firms. Signs have been added to indicate the six that have since been acquired. Loeb Rhoades and Blyth Eastman Dillon sold out to stronger competitors; the others got big prices this year from outsiders wanting a stake in the brokerage business. A new outsider stalking the Street is BankAmerica. The company said last month that it intends—bank regulators permitting—to acquire Charles Schwab Corp., the largest discount broker (but too small an outfit for FORTUNE's gallery of 25). Regulatory approval may be hard to get, since the acquisition of a brokerage firm by a banking company seems to collide with various federal prohibitions.

luctance is Chairman Roger E. Birk. Asked whether he regards the CMA as profitable, he replies: "I regard it as the most innovative and successful product on Wall Street." Well, yes, but is it profitable? He turns to how expensive the product has been to get off the ground. "I do not think we have enjoyed the bottom-line benefits yet." Then, perhaps thinking of the side effects, he amends the statement: "I think it actually contributes to the bottom line. Okay?" He adds a postscript, predicated on the notion that investors will one day forsake the money-market funds and return in droves to the equity markets. On that glorious day, the orchard of CMA accounts will presumably rain its fruit—commissions—on the firm. There, Birk says, will be "the real payoff."

Birk's equivocation would doubtless not surprise Robert Fomon, chairman of E.F. Hutton, a large retail broker that has not merged with anybody. Fomon says the CMA "is not an economic idea," but rather "something you provide customers because your competitors have it." Then why did Merrill Lynch start it? "Don't ask me," Fomon says mournfully. The CMA, it may be surmised, is rather like air conditioning in a store. Once one competitor gets it, the others have to go along. Hutton will loose its CMA clone after the first of the year.

Unprofitable or not, the CMA has powerfully impressed other companies in the financial-services industry. Money-market funds and the CMA together represent a colossal shift of shares in the competition for people's savings—away from banks into the hands of nonbanking companies. It is possible, therefore, to imagine the acquirers of brokerage firms as having acted with a large concept in mind, in which they perceive themselves to be maneuvering for position at a moment rare in business history, the actual restructuring of a major industry. Donald C. Waite III, who directs McKinsey & Co.'s consulting work for banks, leans to that construction of events. "I would like to think," he says, "that what we mainly have here is good, aggressive managers seeing real opportunities and moving fast to grab customers and gain the franchise."

The most visionary of the acquirers may well have been Jim Robinson of American Express. His thinking, he suggests, was overhauled by events in 1980, a year in which the money-market funds grew

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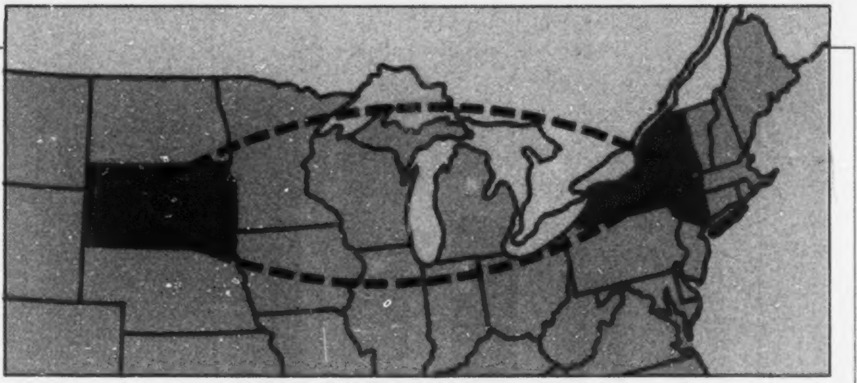


Citicorp's South Dakota Connection

Though the nation's banks remain ensnarled in regulations, state as well as federal, a lot of loosening has occurred over the last couple of years. Asked what deregulatory event of the recent past meant the most to Citicorp, Chairman Walter B. Wriston says without hesitation, "South Dakota." He refers to a move the company made last year to escape New York's usury ceilings on credit-card loans, then 18% on the first $500 and 12% on amounts above that. These ceilings, which applied to out-of-state as well as New York customers, seemed tolerable to Citicorp while its cost of money remained low; but when the cost rocketed in the late 1970s, the ceilings became onerous. Citicorp campaigned strenuously to get them lifted, but with no success. Piling up large losses on credit cards, the company announced in early 1980 that it was thinking of moving all card operations to a more accommodating state.

The one that leaped at the opportunity was South Dakota, which just a few days before had abolished most usury ceilings on consumer loans. But that step alone did not satisfy Citicorp's requirements. To bring all its credit-card customers under South Dakota's rules, the company needed to acquire or establish a national bank within that state. The impediment was the Douglas Amendment, a 1956 federal law stipulating that a bank holding company in one state cannot own a bank in another state unless the second state specifically permits such ownership. No state did—until South Dakota rose to the occasion in March 1980 and passed a law inviting Citicorp in.

New York, getting the message, subsequently raised many of its usury ceilings. Citicorp applauded and, lifting the interest rates it charged, began to enjoy better results on credit cards and other consumer lending. But, having made a commitment, Citicorp stuck by its newfound friend, South Dakota. The company has a real live bank there today, in Sioux Falls, and a force of 400 people, steadily increasing.

"Until all this happened," says Wriston, "the conventional wisdom was that banks were nailed down. We destroyed that myth." Think of it as a chapter in the drive toward interstate banking.

smartly and the CMA really took off. What had looked like evolution, Robinson says, began to resemble revolution. Up to that time, he had kept American Express out of businesses, such as a money-market fund, that competed with the company's customers for traveler's checks—the banks. But Robinson began to reconsider, perhaps telling himself that if the banks were going to lose their deposits to someone, it might as well be to American Express. When Sandy Weill, carrying a money-market fund and CMA plans as baggage, turned up to explore a merger, Robinson was ready. Had the proposition been advanced a year earlier, he says, "maybe the moon would not have been right."

Both Citicorp and Merrill Lynch are probably further along in their thinking about the revolution than any of those three acquirers of brokerages. The pair have looked like financial conglomerates for years and have been in the thick of the money-market surge, though in contrasting ways. Walter Wriston, campaigning for deregulation, loves to spotlight the differences, as he did at Senator Garn's hearing. "Merrill Lynch's money-market fund," he said, "exceeds Citibank's domestic deposits by $2 billion. We've been at it since 1812. They've been at it 24 months." Roger Birk, seated close by, passed up the opportunity to correct Wriston's statement. Merrill Lynch has in fact been at it more like 48 months, and its money-market funds (plural) exceed Citibank's domestic deposits by more than $10 billion. But Birk got his licks in later, deriding the accuracy of a document Wriston had presented to the committee.

Such scrapping is a bit of a put-on. Away from the debating scene, Wriston and Birk are on good terms. Their companies are frequently mentioned as candidates to merge with each other, if regulations change to permit it.

Their thinking, meantime, runs along similar lines in some matters, particularly what may happen if Congress lifts the prohibitions on interstate banking—or, more specifically, interstate deposit taking. Addressing this topic, the most emotional of all banking issues, Birk speaks of "the rhetoric of deregulation," as if he doubts much forward motion. He nevertheless feels that the acquirers of brokerage firms regard the branch offices of those firms as a distribution system that may ultimately be able to take deposits, thereby funding the merged companies' operations. He obviously thinks of his own branches the same way.

The bricks-and-mortar question

Merrill Lynch's branches might serve Citicorp also if the two companies were to merge. But Citicorp has a potential distribution system of its own: 170 consumer-finance offices in 27 states. Wriston talks about turning these offices into deposit-taking establishments if interstate banking arrives—"and it will." His plan: "We'll change the sign on those offices from Citicorp to Citibank and open the teller's window. That's a lot cheaper than buying somebody else for twice book."

All this talk about offices is somewhat ironic, since the popularity of money-market funds, many of them symbolized by an 800 telephone number, has raised the question of whether bricks and mortar are any longer essential to the deposit-taking function. The banks, heavy in buildings, recognize the seriousness of the question. They also feel that its importance has been increased by this year's big acquisitions, since the voice on the end of the money-market fund's line may now represent a major name like Sears or Prudential or American Express.

continued

Calling these three, and Merrill Lynch also, "potent and aggressive competitors," Hans H. Angermueller, senior executive vice president of Citicorp, states the problem as seen by many bankers. "It takes an awful lot to draw a person out of a bank, which has security-blanket aspects," Angermueller says. "But once he's been lured out and gotten used to dealing with another organization—perfectly credible, perfectly competent, and who gives the fellow what he wants—then I'm apprehensive about whether he's going to run back to the bank just because rates come down. So I think it's significant that we can't match these competitors. They're getting a piece of the market share that we're foreclosed from. I think—I hope anyway—that we can catch up with them, but we'll have to play catch-up ball." The overriding threat, he says, echoing McKinsey's Donald Waite, is that the competitors will capture "the customer base."

The competitors will unquestionably be trying, and if reports of the last few months are to be credited, they will hope to gain help from synergy. The possibilities are broad, or seem to be. American Express charge-card operations, for example, include extensive systems, located at the end of 800 telephone numbers, for quickly answering customers' questions about their bills. Today's plot is to hook Shearson's brokerage customers into the same system, which could handle their routine inquiries and transactions, such as cash transfers in and out of money-market funds. The Shearson salesmen would then be freer to concentrate on developing business. "That," a Shearson broker said recently, "would be absolutely wonderful. The time saved would be fantastic."

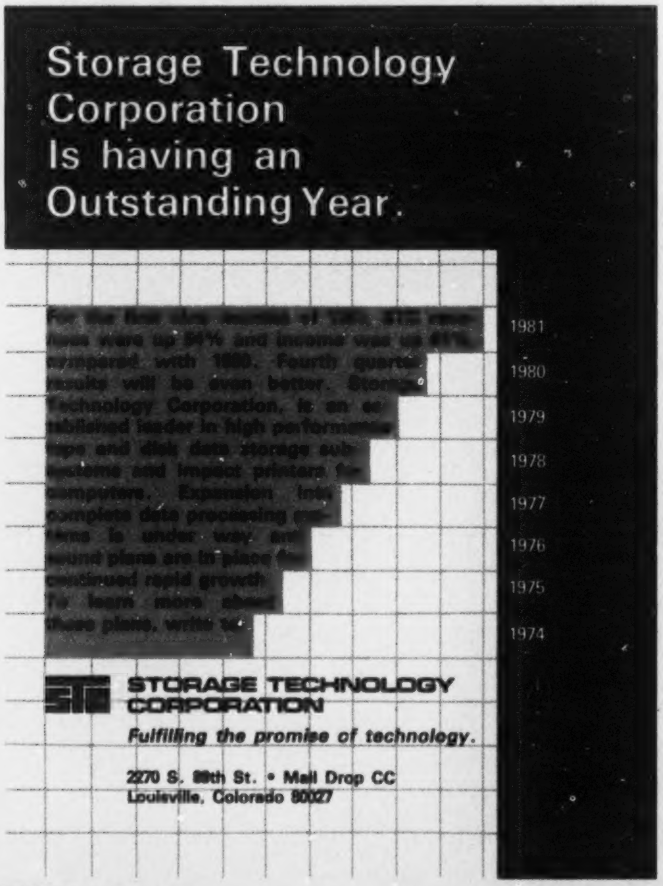
Haste could make "a real mess"

At Prudential, the synergy schemes include an innovative product. Bob Beck has long wanted to market a "family account," through which a customer would secure several different kinds of insurance (perhaps life, homeowners, auto) but pay only a single premium. Ideally, says Beck, such an arrangement would allow the customer to earn interest on credit balances in the account and alternatively to "go in the hole" if he didn't care to ante up for the premium. He might, say, be allowed to meet the bill by borrowing against the cash value in his life-insurance policy.

But Beck says the complexities of trying to effect such a plan within an insurance company add up to "a book," so Prudential has not gone far with the plan. Comes now the CMA—an interest payer, a device for going in the hole, and an idea that strikes Beck as a neat solution. He sees "big possibilities" in combining a CMA-type product and the family account.

He also stresses that it isn't going to happen overnight: too much backup work is required. The last thing you want to do, he says, is create "a real mess that has to be unsnarled later on." He speaks for a methodical company with long horizons.

The most frequently mentioned synergies have been those that might arise from "cross-selling"—the use of a distribution system for a marketing purpose other than that for which it is basically intended. Sears, for example, has multiple distribution systems: its stores, its credit-card list, Dean Witter's sales force, Allstate Insurance's sales force, and still others. Sears cross-sold (very effectively) when, many years ago, it installed Allstate salesmen in its stores, near the automobile-accessories department. There would be cross-selling if Dean Witter sold real-estate participa-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tions packaged by other Sears divisions (which Dean Witter certainly intends to do) or if Sears' credit-card customers got Dean Witter promotional pieces in their monthly statements (which they certainly will). At American Express and Prudential there are similar opportunities.

The problem, however, is that cross-selling seldom seems to work as well as it theoretically might. Mail-order marketing has clicked for the money-market funds; it does not necessarily do so for other financial products. Sears' try at selling Allstate auto insurance through Sears catalogues flopped. Over the years, American Express has had only minimal success pushing Fireman's Fund insurance through mailings to Amex cardholders.

Keeping the kimono closed

Sticky questions may arise out of cross-selling opportunities. To what extent should Shearson salesmen have access to the names of American Express cardholders? This question is apparently under review even now. One Shearson executive said recently that cooperation between the two companies had been "great," with one exception: "They've been very cautious about opening up the kimono of their green-card holders. If Shearson people had their way, those poor helpless cardholders would be sitting there with their phones ringing off the hook. But American Express is sensitive to the relationship it has with the cardholders." They will no doubt be glad to hear that.

Salesmen are themselves a cross-selling uncertainty. Some securities brokers do well at selling supplementary products, such as insurance or tax shelters; most do not, and a lot won't even try. Neither do salesmen cheerfully share their customers. Bache salesmen would like to have access to Prudential's best insurance customers, but why should a Pru salesman turn his list over? Merrill Lynch says this kind of question rises from the "Whiffem" principle—"What's in it for me?" The company has had firsthand experience with it, having tried without much success to generate cooperation between its securities brokers and real-estate brokers.

Merrill Lynch has concluded that it is not smart to bank on synergy when making a deal. As Roger Birk puts it, "Synergism is something we don't pay a lot of money for." Asked whether he always believed in that policy, he replies: "I learned that."

A lot of additional learning should take place over the next few years. Some of it will involve technology, a matter of high priority for every major company in the industry. By the end of the decade, the use of home computers to make banking transactions should be common. Or perhaps, with Leveson's Law at work, the moment will arrive much sooner.

"Tide or Oxydol or what?"

Learning should also result from the embryonic nature of the financial-conglomerate business. A marketing executive familiar with the contours of the business says it reminds him of the detergent industry in 1950: "Everybody's got a detergent tower and doesn't know quite what to do with it. Do you make Tide or Oxydol or what?"

In a world torn by change, that kind of decision becomes intensely more difficult. Roger Birk surveys his new competition and allows that planning for the future has taken on "blood-and-guts significance." The tower keepers of the financial conglomerates appear to see the challenge. ■

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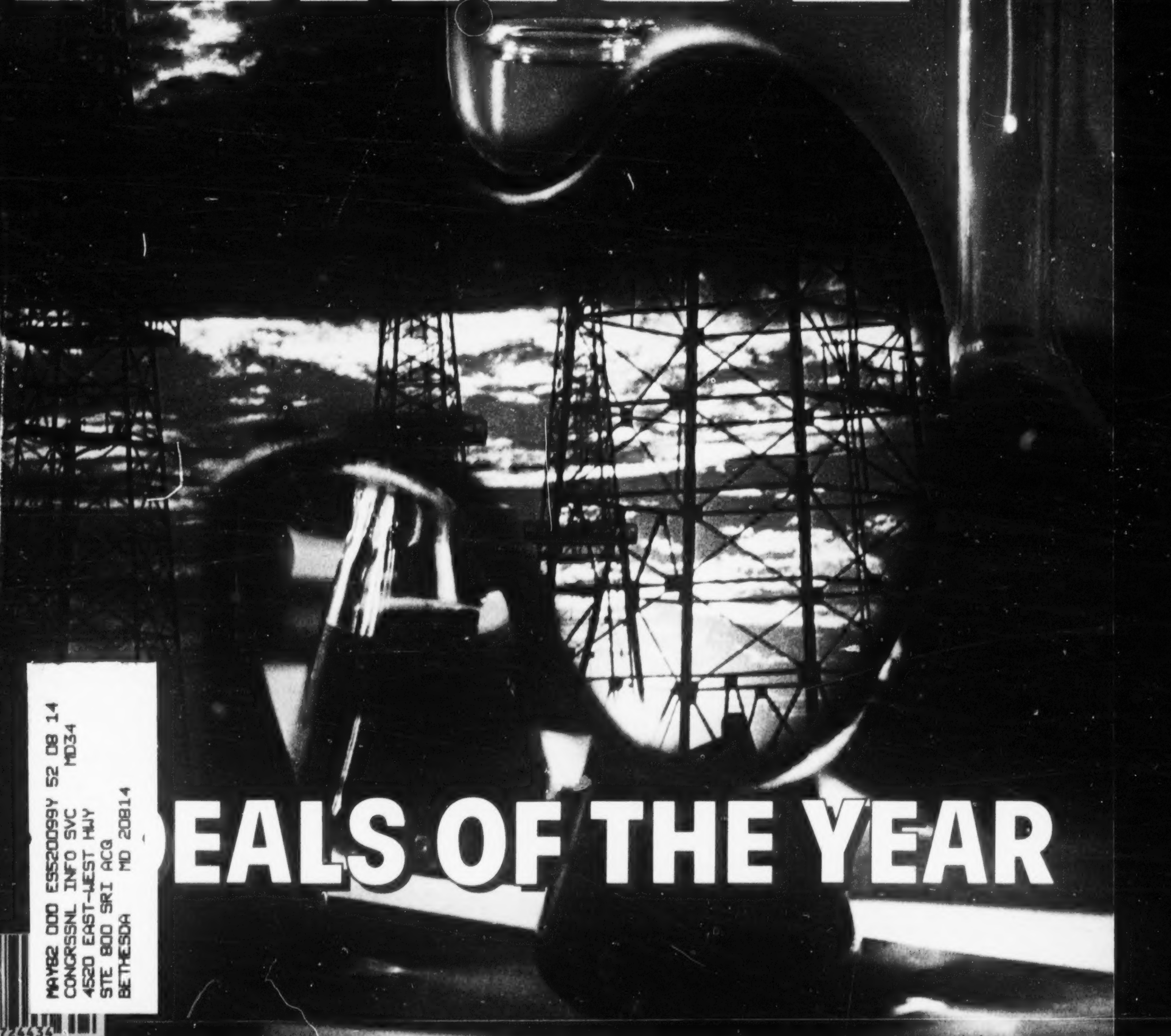

DEALS OF THE YEAR

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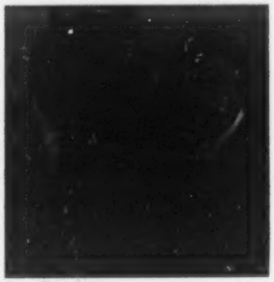
FORTUNE

DEALS OF THE YEAR

The interlocking oil derricks and chemical flasks on the cover signify the joining together of Conoco and Du Pont in the biggest U.S. corporate deal of 1981 (and of history). Mick Roessler photographed the derricks, H. Armstrong Roberts the flasks. A directory of the year's biggest deals begins on page 36.



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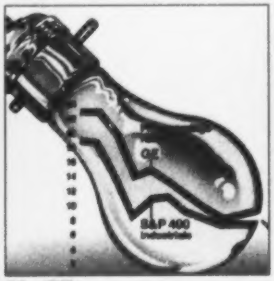

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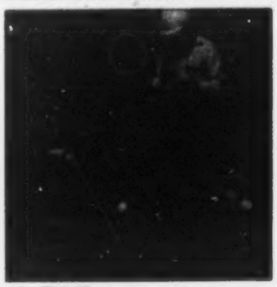

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4—Daniel Kramer. 8—Courtesy the Chicago Tribune Co. 25,26—Chartmakers Inc. 29,30,32—Michael J. McGinn. 36—Left to right, Mick Roessler and H. Armstrong Roberts. 37,38,39,40—Chartmakers Inc. 48—Courtesy Japan Information Center, Consulate General of Japan. 50,51—Courtesy BBDO. 52—Michael Kanarek. 57—Courtesy BBDO. 62—Courtesy South Coast Technology Inc. 66—Courtesy Agricultural Research Service, USDA. 67—Courtesy HUD. 83—Photograph by Frank Spinelli. 86—William Reduto. 94—Courtesy Geosource. 99,100—Patricia Byrne. 115—Bill Park.

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DIRECTORY

Deals of the Year

Last year was a fabulous one for big deals, for the people who helped make them, and for the shareholders of companies other companies coveted. Du Pont, with 1981 sales approaching $15 billion, brought off the biggest corporate deal in U.S. history when it swooped up Conoco, white-knight fashion, and rode off with the hefty damsel, whose sales are about $5 billion greater than Du Pont's own. The gesture cost Du Pont shareholders $7.2 billion, earned a total of about $29 million for the principals' respective investment-banking firms, and helped kick Conoco's stock up almost 100%.

This FORTUNE directory ranks the 50 biggest deals of 1981 and offers a look at the fees collected by the Wall Street outfits that assisted in bringing them off. Not all deals involved putting two companies together, although the 36 corporate combinations on the list account for $36 billion, or 72%, of the $49.9-billion total for all 50 deals. Two cash tenders that didn't lead to marriage account for an additional $4 billion, and 12 giant public financings for the other $9.9 billion. (See the notes on page 40 for an explanation of the kinds of deals that qualify for the list.)

All the merger activity was, of course, highly controversial. Critics—including unhappy target companies—raised fears about concentration and complained that American managers are too prone to buy assets rather than build new ones. Those charges may be easier for the acquiring companies to cope with than the reaction of the stock market, which was unenthusiastic about a lot of the big buys. Near the end of December, shares of 12 of the 19 publicly owned U.S. acquirers had performed worse than the market since the companies announced their intentions to buy; nine were off by more than 15%, and the median performance was minus 8%.

A shining exception

American Express was a shining exception: its shares have risen nearly 50% since it and Shearson Loeb Rhoades, the brokerage firm, announced they would merge (deal No. 15). Analysts say that's because of the merger's splendid "synergy"—a financial-service company joining an aggressive securities house that could offer cash-management services via the American Express card.

No fewer than 15 mergers on the list involve oil companies, and none figured more prominently than Conoco. In addition to the Du Pont deal, Conoco was involved in three other transactions in the top ten: Dome Petroleum's tender for 20% of Conoco's stock (No. 8), Dome's exchange of that stock plus some cash for Conoco's 53% of Hudson's Bay Oil & Gas (No. 7), and Seagram's tender for Conoco (No. 3) in competition with Mobil and Du Pont, which left the Canadian distiller with almost a third of Conoco's shares.

Most names on the list are those of familiar corporate giants, but a few individuals got on too, most noticeably Marvin Davis, 56, the Denver oil tycoon, who figures twice: first when he sold assets of his Davis Oil Co. (No. 27), and second when he bought Twentieth Century-Fox (No. 23). Another oilman, Samuel R. Goldstein, about 60, a reclusive Missourian who won't give interviews, used the resources of his private oil-trading partnership, Apex Oil (1980 sales: $6.25 billion), to buy Clark Oil & Refining (No. 41).

A standout among the dealmakers is Salim (Sandy) B. Lewis, the managing general partner of a small arbitrage firm. Lewis, 42, came up with the idea of marrying American Express and Shearson. He took the proposal to American Express Chairman James Robinson, an old friend, and then to Sandy Weill, Shearson's chief. Soon Weill and Robinson were talking over the idea. When they got around to discussing Lewis's fee, he says he drew a blank. "I would almost have done the deal for nothing, as a learning experience," he says. But there was no need for that. Sportingly, Robinson and Weill hit on $3.5 million—0.36% of the value of the deal.

In all, mergers on this list generated a total of $144.6 million in fees known to have been paid to financial intermediaries. The median was $2.1 million, and the median percentage of the transaction value was 0.21%. Morgan Stanley was the big winner, garnering about $40 million in fees. Next was First Boston, with nearly $26 million, followed by Lehman Brothers Kuhn Loeb, with close to $15 million. Success counts: when deals fall apart, dealmakers' fees crumble too. For example, First Boston, which got $2.5 million for advising Santa Fe International in its merger with Kuwait Petroleum (No. 4), was promised a consolation prize of only $250,000 had the deal fallen through.

Three deals on the list (Nos. 46, 47, and

48) were engineered by Kohlberg Kravis Roberts & Co., champions of the "leveraged buyout." To pull one off, Kohlberg Kravis, in partnership with institutional investors, buys a company, usually with money that is mostly borrowed. The debt is serviced from the acquired earnings stream. The top managers also generally take an equity stake in the company. Kohlberg's fees—close to 1% in two deals—are as high as any on the list.

Among the public financings, American Telephone & Telegraph raised more than $1.6 billion in two offerings, and the Federal National Mortgage Association (Fannie Mae) raised $8.3 billion in ten debenture offerings. A congressionally chartered private corporation whose shares are listed on the New York Stock Exchange, Fannie Mae uses the money to buy residential mortgages. Fannie Mae's creditors seem oddly unconcerned that the old girl was likely to lose at least $200 million in 1981. —EDWARD MEADOWS

RANK	COMPANY	VALUE (000)	TRANSACTION	% OF BOOK VALUE	INDUSTRY	FINANCIAL INTERMEDIARIES	FEE (000)	FEE AS % OF DEAL
1	DU PONT	$7,214,858	Acquisition for cash and common stock, closed 9/30	158%	Chemicals, fibers	First Boston	$15,000	.21%
	CONOCO				Oil, gas, and coal	Morgan Stanley	$14,000*	.19%*
2	ELF AQUITAINE	$2,741,670	Acquisition of 65% for cash, 9/28[1]	212%	Oil and gas (France)	Salomon Brothers Lazard Frères	$3,862 N.A.	.14% N.A.
	TEXASGULF				Natural resources	Morgan Stanley	$5,000*	.20%*
3	SEAGRAM	$2,552,275	Cash tender for 32%, 8/7[2]	171%	Distilling (Canada)	Shearson Loeb Rhoades Lazard Frères	$3,497 $3,497	.14% .14%
	CONOCO				Oil, gas, and coal	Morgan Stanley	$1,000	.04%
4	KUWAIT PETROLEUM	$2,500,774	Acquisition for cash, 12/4	370%	Oil and gas (Kuwait)	Salomon Brothers Morgan Guaranty Trust	N.A. N.A.	N.A. N.A.
	SANTA FE INTERNATIONAL				Contract drilling, engineering, and construction	First Boston	$2,500	.10%
5	FLUOR	$2,342,040	Acquisition for cash and common stock, 8/3	190%	Engineering and construction	Lehman Brothers Kuhn Loeb	$5,000	.21%
	ST. JOE MINERALS				Mining	Smith Barney Harris Upham First Boston	$3,500 $1,500	.15% .15%
6	STANDARD OIL OF OHIO	$1,787,580	Acquisition for cash, 6/4	123%	Oil and gas	Goldman Sachs	N.A.	N.A.
	KENNECOTT				Copper, metal products	Morgan Stanley	$750	.04%
7	DOME PETROLEUM	$1,675,000	Acquisition of 53% from Conoco for cash and Conoco common stock, 6/10	631%	Oil and gas (Canada)	Shearson Loeb Rhoades	$2,000	.12%
	HUDSON'S BAY OIL & GAS				Oil and gas (Canada)	Morgan Stanley (advised Conoco)	See footnote[3]	
8	DOME PETROLEUM	$1,430,000	Cash tender for 20%, 6/3	147%	Oil and gas (Canada)	Shearson Loeb Rhoades	See footnote[4]	
	CONOCO				Oil, gas, and coal	Morgan Stanley	See footnote[3]	
9	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$1,300,000	Offering of 13.6% debentures due 1986, 12/10		Mortgage holder	Various dealers	$2,600	.20%
10	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$1,200,000	Offering of 14.1% debentures due 1985, 11/16		Mortgage holder	Various dealers	$2,100	.18%

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 40.

* Fortune estimate.
N.A. Not available.

[1] Elf will acquire the remaining 35% in 1982 from Canada Development Corp.
[2] Seagram later exchanged its Conoco stock for 20% of Du Pont.
[3] Fee included in figure for Du Pont-Conoco deal.
[4] Fee included in figure for Dome Petroleum-Hudson's Bay Oil & Gas deal.

Deals
of the Year

RANK	COMPANY	VALUE (000)	TRANSACTION	% OF BOOK VALUE	INDUSTRY	FINANCIAL INTERMEDIARIES	FEE (000)	FEE AS % OF DEAL
11	AMERICAN TELEPHONE & TELEGRAPH	$1,034,550	Offering of 18,150,000 shares of common stock at $57, 6/10	96%	Telecommunications	Morgan Stanley,* Goldman Sachs, E.F. Hutton, Kidder Peabody, Merrill Lynch White Weld	$38,133	3.7%
12	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$1,000,000	Offering of 13% debentures due 1986, 1/12		Mortgage holder	Various dealers	$2,600	.26%
13	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$1,000,000	Offering of 16% debentures due 1983, 9/10		Mortgage holder	Various dealers	$1,250	.13%
14	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$1,000,000	Offering of 17.2% debentures due 1984, 10/13		Mortgage holder	Various dealers	$1,500	.15%
15	AMERICAN EXPRESS	$988,921	Acquisition by exchange of common stock, 6/29	329%	Financial services	Salomon Brothers S.B. Lewis & Co.	$500 $1,750	.05% .18%
	SHEARSON LOEB RHOADES				Securities	S.B. Lewis & Co. Bear Stearns	$1,750 $350	.18% .04%
16	CANADIAN PACIFIC ENTERPRISES	$912,130	Acquisition for cash, 10/1	N.A.	Paper products (Canada)	Salomon Brothers	N.A.	N.A.
	CANADIAN INTERNATIONAL PAPER (International Paper)				Paper products	None	—	—
17	MIDLAND BANK	$820,000[3]	Acquisition of 57% for cash, 10/15[3]	180%	Commercial banking (Britain)	Lazard Frères Salomon Brothers	$2,000 $2,000	.24% .24%
	CROCKER NATIONAL				Commercial banking	Lehman Brothers Kuhn Loeb Dean Witter Reynolds	$2,875 $400	.35% .05%
18	NABISCO	$782,835[4]	Merger by exchange of common stock to form Nabisco Brands, 7/6	118%	Food products	Morgan Stanley	$3,000	.38%
	STANDARD BRANDS				Food products	Lehman Brothers Kuhn Loeb	$3,000	.38%
19	OCCIDENTAL PETROLEUM	$770,330	Acquisition by exchange of common stock, 8/12	340%	Oil and gas	Donaldson Lufkin & Jenrette	$750	.10%
	IOWA BEEF PROCESSORS				Meat processing	Goldman Sachs	$600	.08%
20	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$700,000	Offering of 17% debentures due 1985, 8/17		Mortgage holder	Various dealers	$1,050	.15%
21	PENN CENTRAL	$698,598	Acquisition for cash, 8/14	231%	Energy, recreation, real estate	Lazard Frères Lehman Brothers Kuhn Loeb	$2,750 $625	.39% .09%
	GK TECHNOLOGIES				Wire and cable	Morgan Stanley Blyth Eastman Paine Webber	$3,250 $600	.46% .09%
22	GL CORP. (owned by the Pritzker family)	$688,213	Acquisition for cash, 2/10	196%	Metal manufacturing	N.A.	N.A.	N.A.
	TRANS UNION				Railcar leasing	Salomon Brothers	$500	.07%
23	TCF HOLDINGS (owned by Marvin Davis)	$684,234	Acquisition for cash, 6/12	236%	(New company)	Salomon Brothers	$5,000●	.73%●
	TWENTIETH CENTURY-FOX FILM				Motion pictures	Lehman Brothers Kuhn Loeb Dillon Read Kidder Peabody	$850 $350 $325	.12% .05% .05%
24	COOPER INDUSTRIES	$673,449	Acquisition by exchange of common stock, 4/29	278%	Oil-and-gas equipment, tools	Lehman Brothers Kuhn Loeb	$2,117	.31%
	CROUSE-HINDS				Electrical equipment	Lazard Frères	$2,500	.37%
25	HOSPITAL CORP. OF AMERICA	$660,000	Acquisition for cash and common stock, 8/28	481%	Hospital management	None	—	—
	HOSPITAL AFFILIATES INTERNATIONAL (HAI)				Hospital management	Goldman Sachs	N.A.	N.A.

● Fortune estimate.
N.A. Not available.
*Lead manager.

[3] Acquired 51% in 1981. Value includes price of additional 6% to be purchased by 1985.
[4] Valued as if Standard Brands were the acquired firm.

RANK	COMPANY	VALUE (000)	TRANSACTION	% OF BOOK VALUE	INDUSTRY	FINANCIAL INTERMEDIARIES	FEE (000)	FEE AS % OF DEAL
26	WESTINGHOUSE BROADCASTING [Westinghouse Electric]	$647,039	Acquisition for cash, 8/18	438%	Broadcasting	Lehman Brothers Kuhn Loeb	N.A.	N.A.
	TELEPROMPTER				Cable television	Allen & Co.	$800	.12%
27	HOME PETROLEUM [Hiram Walker Resources]	$630,000	Acquisition for cash, 9/11	N.A.	Oil and gas (Canada)	Morgan Stanley	N.A.	N.A.
	OIL AND GAS PROPERTIES OF DAVIS OIL (owned by Marvin Davis)				Oil and gas	None	—	—
28	SEARS ROEBUCK	$606,900*	Acquisition for cash and common stock, 12/31	264%*	Retailing	Goldman Sachs	$2,000	.33%*
	DEAN WITTER REYNOLDS				Securities	None	—	—
29	AMERICAN TELEPHONE & TELEGRAPH	$600,000	Offering of 13.25% notes due 1991, 2/17		Telecommunications	Salomon Brothers*, Bache Halsey Stuart Shields, Blyth Eastman Paine Webber, First Boston, Lehman Brothers Kuhn Loeb, Merrill Lynch White Weld	$2,850	.48%
30	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$600,000	Offering of 15.25% debentures due 1985, 7/10		Mortgage holder	Various dealers	$1,050	.18%
31	STANDARD OIL OF OHIO	$600,000	Acquisition for cash, 9/30	N.A.	Oil and gas	None	—	—
	COAL PROPERTIES OF U.S. STEEL				Coal mining	None	—	—
32	CSR	$591,190	Acquisition for cash, 11/20	1900%	Diversified resources (Australia)	First Boston	$1,300	.22%
	DELHI INTERNATIONAL OIL				Oil and gas in Australia	Morgan Stanley	$3,500	.59%
33	PHIBRO	$550,000	Acquisition for cash and debentures, 10/1	247%	Commodity trading	Lazard Frères	N.A.	N.A.
	SALOMON BROTHERS				Securities	None	—	—
34	ONTARIO ENERGY RESOURCES [Ontario Energy Corporation]	$543,400	Acquisition of 25% for cash and notes, 12/29	N.A.	Oil and gas (Canada)	McLeod Young Weir	N.A.	N.A.
	SUNCOR [Sun]				Oil and gas (Canada)	Warburg Paribas Becker	N.A.	N.A.
35	ALLEGHENY INTERNATIONAL	$527,900*	Acquisition for cash and preferred stock, 12/31	132%*	Specialty metals, industrial products	First Boston	$3,000	.57%*
	SUNBEAM				Household appliances	Morgan Stanley	$2,600	.49%*
36	CATERPILLAR TRACTOR	$505,000	Acquisition for cash, 7/31	N.A.	Earthmoving machinery	Goldman Sachs	N.A.	N.A.
	SOLAR TURBINES INTERNATIONAL [International Harvester]				Turbomachinery	Lehman Brothers Kuhn Loeb	N.A.	N.A.
37	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$500,000	Offering of 14.25% debentures due 1986, 3/10		Mortgage holder	Various dealers	$875	.18%
38	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$500,000	Offering of 13.75% debentures due 1986, 4/10		Mortgage holder	Various dealers	$875	.18%
39	FEDERAL NATIONAL MORTGAGE ASSOCIATION	$500,000	Offering of 14.8% debentures due 1984, 6/10		Mortgage holder	Various dealers	$750	.15%
40	GRAND METROPOLITAN	$500,000	Acquisition for cash, 8/10	420%	Hotels (Britain)	Citibank Douglas Elliman Knight Frank	N.A. $1,000	N.A. .20%
	INTERCONTINENTAL HOTELS [Pan American World Airways]				Hotels	Smith Barney Harris Upham Lehman Brothers Kuhn Loeb	N.A. N.A.	N.A. N.A.

Deals of the Year

RANK	COMPANY	VALUE (000)	TRANSACTION	% OF BOOK VALUE	INDUSTRY	FINANCIAL INTERMEDIARIES	FEE (000)	FEE AS % OF DEAL
41	APEX OIL	$478,1[illegible]6	Acquisition of 90% for cash, 10/30[7]	233%	Petroleum trading	Merrill Lynch White Weld	$750	.16%
	CLARK OIL & REFINING				Petroleum refining	Lehman Brothers Kuhn Loeb	N.A.	N.A.
42	GENERAL FOODS	$465,117	Acquisition for cash, 5/8	153%	Food products	Lehman Brothers Kuhn Loeb	N.A.	N.A.
	OSCAR MAYER				Meat processing	Morgan Stanley	$2,400	.52%
43	SULPETRO	$460,166	Acquisition of 92% for cash, 4/3	595%	Oil and gas (Canada)	None	—	—
	CANDEL OIL [St. Joe Minerals]				Oil and gas (Canada)	Smith Barney Harris Upham First Boston	See footnote[8]	
44	DART & KRAFT	$456,000	Acquisition for cash, 4/29	201%	Food and dairy products	Goldman Sachs	$1,250	.27%
	HOBART				Food equipment	Merrill Lynch White Weld	$3,400	.75%
45	FREEPORT MINERALS	$455,823[9]	Merger by exchange of common stock to form Freeport-McMoRan, 4/7	1090%	Mining	First Boston	$200	.04%
	McMORAN OIL & GAS				Oil and gas	Lazard Frères	$1,250	.27%
46	AMERICAN FOREST PRODUCTS (formed by Kohlberg Kravis Roberts)	$425,000	Acquisition of 96% for cash, 1/27	N.A.	(New company)	Kohlberg Kravis Roberts	N.A.	N.A.
	BENDIX FOREST PRODUCTS [Bendix]				Forest products	Lehman Brothers Kuhn Loeb	N.A.	N.A.
47	NORIND HOLDINGS (formed by Kohlberg Kravis Roberts)	$420,000	Acquisition for cash, 12/9	153%	(New company)	Kohlberg Kravis Roberts	$4,000	.95%
	NORRIS INDUSTRIES				Building and remodeling	Goldman Sachs	$3,001	.71%
48	FM ACQUISITION and FRED MEYER REAL ESTATE PROPERTIES (formed by Kohlberg Kravis Roberts)	$420,000	Acquisition for cash, 12/11	213%	(New companies)	Kohlberg Kravis Roberts	$4,500	1.1%
	FRED MEYER				Retailing	Kidder Peabody Merrill Lynch White Weld	$4,650 $350	1.1% .08%
49	TENNECO	$417,000	Acquisition by exchange of common stock, 4/24	127%	Oil and gas	Morgan Stanley	$3,250	.78%
	HOUSTON OIL & MINERALS				Oil, gas, and minerals	Merrill Lynch White Weld Eppler Guerin & Turner	$6,000[10]	1.4%[10]
50	NATOMAS	$415,847	Acquisition of 92.5% for cash[11]	537%	Oil and gas	Warburg Paribas Becker	$1,700	.41%
	MAGMA				Geothermal resources	Drexel Burnham Lambert Smith Barney Harris Upham	N.A. N.A.	N.A. N.A.

● Fortune estimate.
N.A. Not available.

[7] Apex had previously purchased 10%.

[8] Fees included in figures for Fluor-St. Joe deal.

[9] Valued as if McMoRan Oil & Gas were the acquired firm.

[10] Includes fees for advice on conveyance of royalty interests to Houston Oil Trust.

[11] Natomas had previously purchased 7.5%.

EXPLANATORY NOTES

Deals eligible for the list include:

1. U.S. public offerings of securities (except short-term securities) by domestic and foreign corporations issued under a single prospectus or offering circular.
2. Cash tender offers by domestic corporations or by foreign corporations tendering in the U.S., including those of companies buying in their own stock.
3. Mergers or acquisitions in which the buyer and/or seller is a U.S. company (or part of one). To be eligible, offerings must be effective in 1981 and tender offers must have expired during the year. Mergers and acquisitions are eligible if legally closed during the year or, when not legally closed, if the prospective buyer has paid a portion of the purchase price in cash during the year.

The list excludes short-term financings and financings other than public offerings—such as bank borrowings and private placements.

COMPANY: In the case of mergers and acquisitions, the buyer is listed first. When two companies merge through an exchange of stock to form a new company, the company whose stockholders received the largest share of the new company is treated as the buyer. When the buyer or seller is a subsidiary, the parent's name is given in brackets.

VALUE: Amounts for cash offerings are the total amounts raised; for tenders, the total amount paid. All securities issued in acquisitions or mergers are valued at the market price on the date of closing. If not closed, valuations are for December 18 (and those of new securities are estimated). Exception: when a new company is formed by merger, only those shares issued to stockholders of the smaller company, as explained under COMPANY, are valued.

TRANSACTION: Dates under this heading are effective dates for offerings, expiration dates for tenders, and closing dates for acquisitions and mergers. When no date is indicated, the deal has not closed.

PERCENT OF BOOK VALUE: Book-value calculations indicate the price paid (or amount of equity capital raised) per share as a percentage of the shareholders' equity per share of the acquired company (or issuer) at the end of the last quarter preceding the transaction.

FINANCIAL INTERMEDIARIES: For underwritten public offerings, the co-managers are listed and the lead manager is indicated by an asterisk. In the case of acquisitions and mergers, the intermediaries are typically investment-banking firms that assisted in the transaction.

FEE: The figures represent the amounts charged by the financial intermediaries assisting in the deals. In underwritings, part of the fee is paid to other members of the underwriting syndicate or to dealers other than the co-managers.

THE DATA IN THIS DIRECTORY WERE PREPARED BY REPORTER SARAH BARTLETT.

Columbia Pictures' Wall Street Ar

The Mess at Consumers Union

A Nuclear Fiasco Shakes the Bond Market

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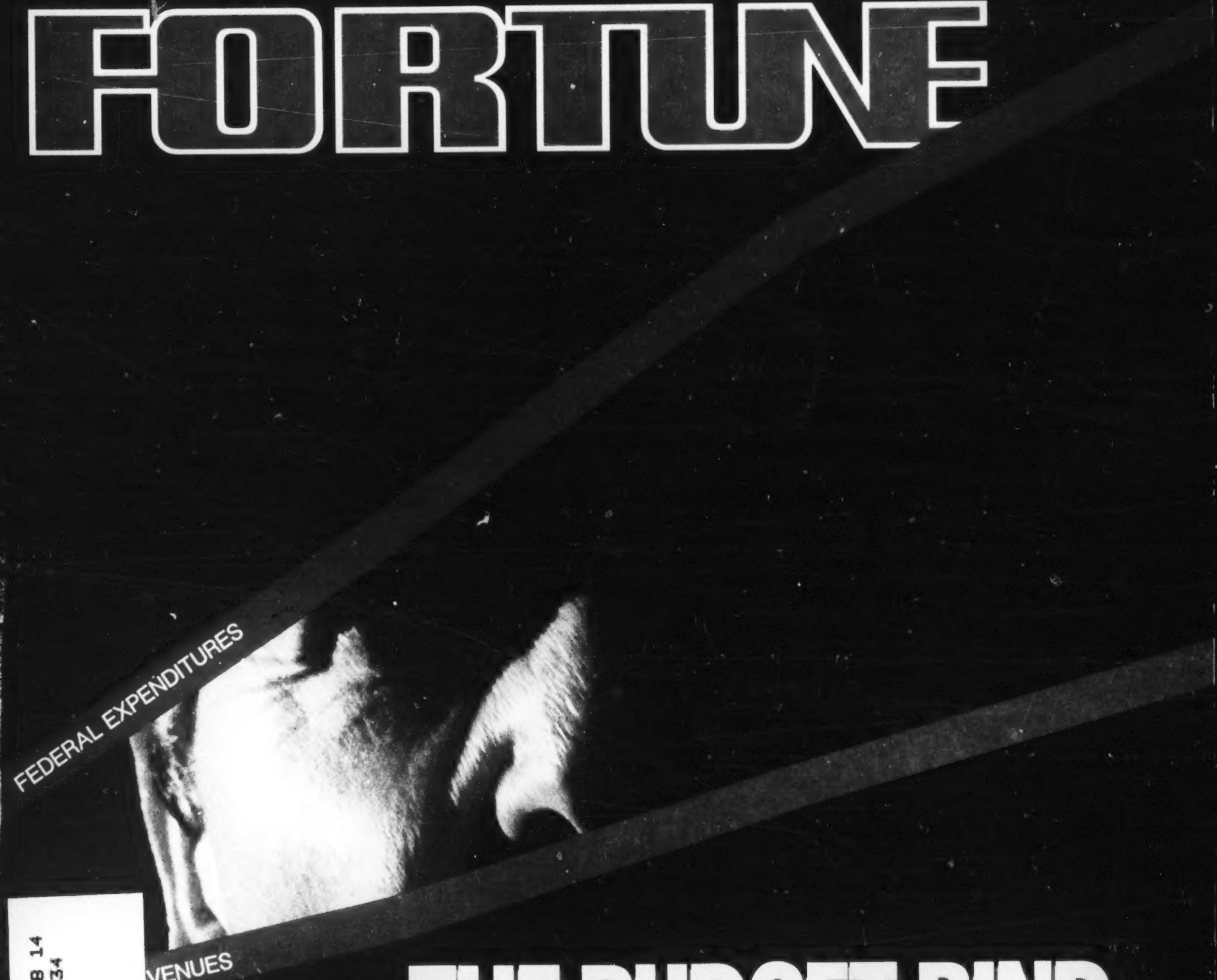
$2.50 February 22, 1982

FORTUNE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THE BUDGET BIND

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THE BUDGET BIND

President Reagan, in the cover photograph by Dennis Brack-Black Star, squints through the widening deficit. As projected by Bear Stearns economist Robert Sinche, the gap grows from $57.9 billion in fiscal 1981 to $174.5 billion in 1984.

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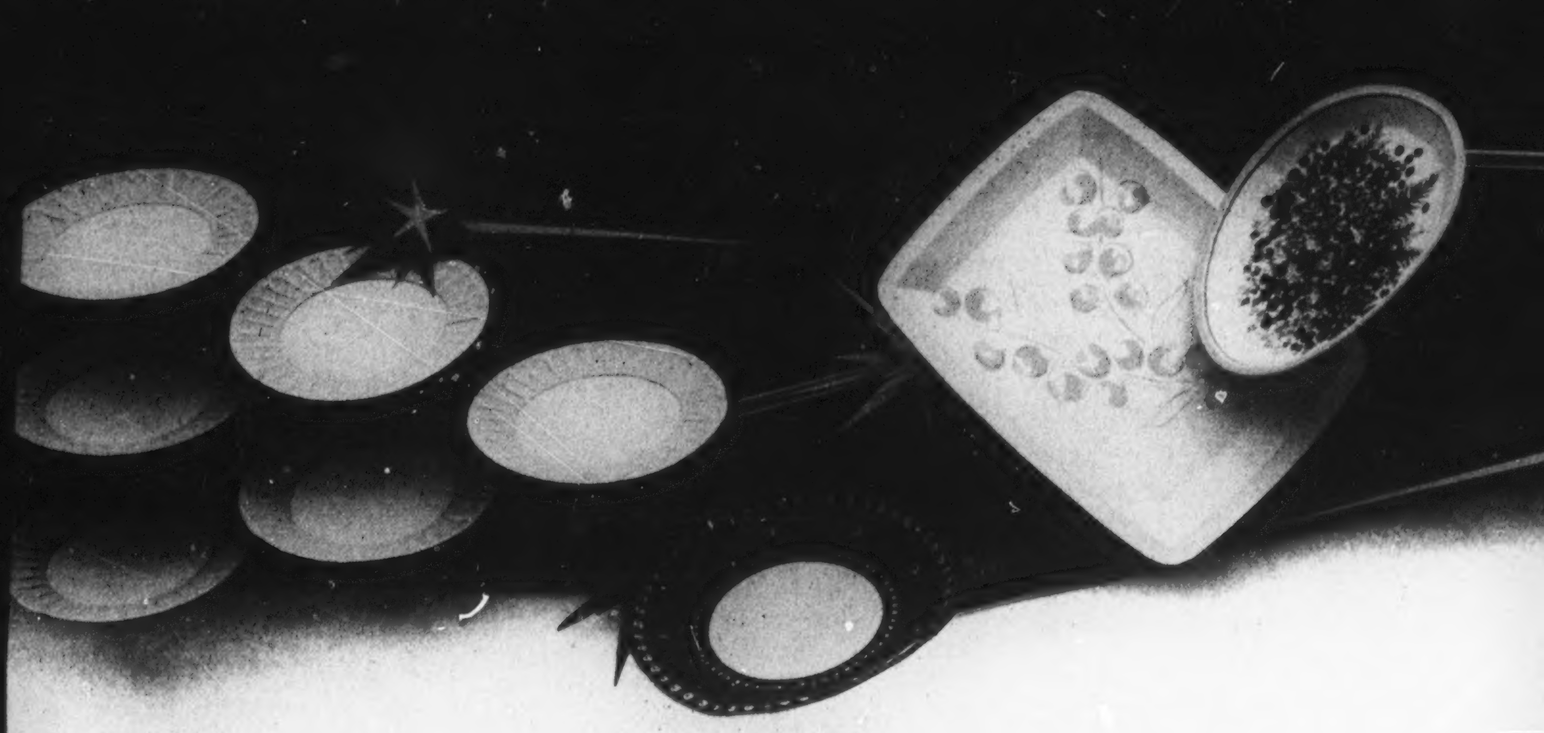

MARKETING

Plate Wars

The margins are paper-thin and the casualties heavy in the disposable-dish market.

by JEREMY MAIN

The demographics of the paper-plate business look terrific—at least on paper. More and more Americans live the sort of lives that discourage dishwashing. Singles, working couples, and unsociable souls who snack in front of the TV set instead of sitting down to a family meal are all potential customers for disposable dishes. The fast-food chains create another big opportunity. How would McDonald's ever manage if it had to wash up after 35 billion hamburgers? Like the portable tape deck, the paper plate would seem to have found its moment in history.

The moment finds manufacturers like American Can (Dixie brand), Maryland Cup (Sweetheart), Keyes Fibre (Chinet), Continental Group (Bondware), and half a dozen others hurling plates at each other in a highly competitive struggle. The paper-plate industry may be only a sideshow in the clash of great corporations, but it is a mighty lively sideshow. Mobil recently blasted into the market in its customarily roughshod manner with a petroleum-based "foam" plate that makes the competition decidedly tougher. After playing unsuccessfully on the edges of the market for years, St. Regis has fired off a well-promoted sales effort. On the other hand, two major companies, Georgia-Pacific and Potlatch, have quit the business and three others, including American Can, have sold or are about to sell their paper-plate subsidiaries.

Sales in this stormy marketplace total some $2.4 billion a year, by the estimate of Ronald N. Paul, president of Technomic Consultants, a Chicago-based firm that works with the industry. That figure includes ancillary products, such as napkins and plastic flatware, which some of the manufacturers also produce. It does not include the high-priced party-ware such as Hallmark's, sold through specialty stores.

But profit margins remain paper-thin. The established manufacturers keep searching fruitlessly for the key that will turn disposables into steady moneymakers. "It's hard to see how anyone in their right mind would come into this business from scratch in an aggressive way today because margins are down, costs are up, and it could be difficult to recoup a big investment," says Will Willis, vice president for consumer products at Keyes Fibre.

The basic trouble with the business, one veteran explains, is "there's no juice in plain paper plates." In this case, juice refers to profit margin and not to the gravy that's likely to seep through a plate onto your lap if you linger over dinner. The plain plate is a flimsy piece of paperboard 7/1,000ths of an inch thick that tends to buckle under the weight of a slice of pizza. It retails for about one penny, which doesn't leave much room for profit.

Manufacturers keep trying to squeeze some juice out of this unpromising material by giving it "added value." They put gaudy designs on plates, add laminations to stop seepage, make the plates sturdier, create new shapes and uses. More than half the plates sold today are either decorated paper or relatively substantial products made from wood pulp or polystyrene foam. They fetch 3 cents to 7 cents each, and have correspondingly better margins. In the newest breakthrough, several companies have introduced what they call "ovenable" plates that can be used for

Research associate: Anne B. Pillsbury

Paper sculpture by Sally Jo Vitsky

cooking as well as eating. The manufacturers have pushed brand names, improved displays, and worked on the usual market lures of promotions, coupons, and tie-ins.

All these efforts have met with very modest success, though sales are growing somewhere between 3% and 6% a year—statistics about this industry tend to be elusive, like profits. Fully 44% of the dollar volume is still made up of those profitless penny plates. Moreover, something like $1.6 billion of the industry's sales are to fast-food chains, institutions, and sports arenas, which buy largely on price. Margins should be higher in supermarkets, but there, too, buyers tend to treat plates as they treat commodities like potatoes. They bargain for the best price and don't much care whose product they stock.

Why go home to plastic?

As yet, no manufacturer other than Dixie has succeeded in creating a truly proprietary product. Consumers don't know the brands and have little loyalty. "Let's face it, disposable dishes are still something people apologize for," apologizes Tony Mazzarelli, marketing manager for Amoco Food Service Products, one of the less successful manufacturers. "I don't want to go home and eat off plastic plates. I don't think most people do, really."

From the beginnings of the paper-plate industry early in the century, manufacturers have racked their brains trying to find ways of marketing their products. The first appeal was sanitary. Dixie got its start when a Kansas health officer, Dr. S. J. Crumbine, observed children on a train drinking out of the same unwashed communal cup that tuberculosis patients were using. He banned the common cup, and the disposable cup was launched. In those early days, the Lackawanna Railroad advertised disposable cups on "all through trains" with a picture of Phoebe Snow, the emblem of the line's service, and a verse: "On railroad trips/ No other lips/ Have touched the cup/ That Phoebe sips."

In the struggle to rise above the penny plate and its wretched margin, manufacturers began adding decorations in the 1960s and using them as a serious competitive weapon in the 1970s. Decorated, laminated plates are relatively easy to make. The plates are stamped out of paperboard imprinted with a design and coated with nitrocellulose. The result is somewhat more rigid than the penny plate, has a glossy surface, and, in the tactful phrase of a Maryland Cup executive, is less likely "to transfer absorbance," that is, to leak.

The value added by decoration is considerable. John Cavalier, the plump, ebullient vice president and general manager of Dixie for American Can, points out the difference. A ton of paperboard costs $575. Made into penny plates, that ton is worth $1,000, he says. But add four- or six-color printing and lamination, and a ton of paperboard acquires a value of $3,000 or more. Cavalier says the decorations do add considerably to the cost, though he won't say how much. He doesn't apologize for paper plates. He has six daughters and the family uses paper regularly.

A switch to soft colors

The decorations favored by Dixie and others tend to improbable bunches of yellow and orange flowers, which are apt to take on a lurid quality in combination with, say, mustard and ketchup. Throughout the 1970s the best-selling design was Dixie's much-imitated Spring Medley. Yellows and oranges apparently sold best because they matched the most prevalent kitchen color, "harvest gold."

Dixie is now switching its whole color scheme to softer tones, to rusts, browns, and beiges. Says Cavalier, "We're very aware of color trends because it's crucial to be able to read them early." How were these trends read? By watching Burger King and McDonald's, for whom Dixie and others produce custom designs; they are toning down their eateries with more wood, brick, and plants. The new styles are flowing rapidly to other customers. For smaller fast-food clients, Dixie is introducing Ivy, a pattern of small brown and reddish leaves resembling nothing known to horticulture but embodying, in the words of a Dixie spokesman, "the essence of ivy." For retail customers, Dixie has brought out Flower Patch, a bunch of calico flowers against a beige trellis. St. Regis is going off in another direction by introducing a relatively sophisticated floral design called Enchantment—a sample of which graces the chart on page 80.

Molded pulp plates are known in the trade as the Cadillac of the industry. They earn this improbable sobriquet—along with higher margins—because they boast a smoother, more finished look than stamped plates and are more substantial. Keyes Fibre, whose Chinet brand leads the field, boasts that a customer wrote recently to complain that her Chinet plates got soggy the third time she put them through the dishwasher. But since the plates are molded from liquid pulp, decorations cannot be applied before the plates are made. Adding print later makes the process more expensive. That's why Keyes decorates only the rim of its plates with a discreet garland of flowers.

If the disposable plate saves labor, how much more of a boon would be disposable cooking ware that could eliminate the hand-scrubbing of pots encrusted with the remains of dinner. That's the rationale, anyway, for the newest value-added products. With ovenable dishes—well, partly ovenable dishes—the industry is reaching the zenith of its technology, in apparent defiance of the laws of thermodynamics. Dixie, which won't disclose what it does to paper to inhibit its natural inclination to scorch, says one line of its new dishes can be used in an oven heated to 400° F., though not in a hotter oven or a broiler. (All paper and foam dishes can stand up to a microwave oven, although the oils, fats, and sugar in food can heat up to more than the melting point of polystyrene, with results that could be inedible.)

Grousing about Mobil

By now, paper-plate manufacturers should have been reaping handsome rewards from these efforts to add value. But it hasn't happened. The main reason, say the disgruntled platemakers, is Mobil Chemical Co., aided and abetted by Amoco, and its aggressive effort to sell foam plates. "They've really whored up the market," says an exasperated competitor, who grouses that Mobil sells cheap to buy market share. Mobil says its plates are priced to make a profit.

Amoco began selling foam plates back in 1967 but has had little luck, mostly because it lacked the right retail know-how. Mobil had the Hefty-bag brand name and a tough, responsive retail network in the supermarkets and discount stores, so when Mobil's Hefty plates went on sale in 1978, they were a success. Last year Hefty shot up to third place in the retail market, albeit a distant third, behind Chinet and Dixie.

The average price of foam plates has dropped 10% since 1978, and foam now has 10% of the retail market. Since Dixie increased its share of the market last year, while Keyes's growth rate slowed, Mobil's gain seems to have been chiefly at Keyes's expense. Plain Hefty plates cost 3½ to 4 cents and decorated Hefty plates 5 to 6 cents, so Mobil competes at the price levels of both decorated and pulp plates. Paper-plate people are replying with foam plates of their own. (For years they have been making foam products for the fast-food industry, which values foam's insulation.) Dixie is beginning to sell a foam line consisting of La Plate, La Cup, and La Bowl. The line is decorated with what appears to be a sprig of yellow berries.

The problems of the industry go well beyond foam, however. Years of low margins have discouraged companies from putting money into market research and promotion. TV advertising has been minimal,

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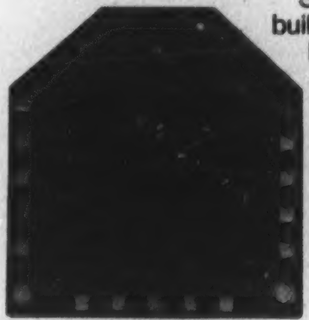

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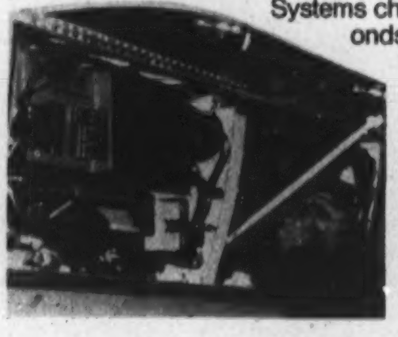


and most brand names are unrecognized. And the very decorations meant to say "buy me" may actually have put off customers. St. Regis is pushing its more sophisticated design because it believes that 30% of the public has turned up its nose at the decorations offered so far. Some further resistance to paper plates may have been aroused by the environmental argument against disposables, although no one knows how much.

Supermarket managers would generally rather think about other things than paper plates. Demand remains largely seasonal, with sales concentrated in the summer and at the end of the year, so the shelf space allotted to them tends to shrink at other times. Store managers prefer merchandise that sells year-round for a high margin.

Optimists in the industry think they know how to win more shelf space. "The key to this whole business is merchandising," says John Coleman, a New England supermarket broker who has handled Chinet for years. "Which brand of plate sells best depends almost entirely on what kinds of promotions we can arrange." Until recently, paper plates were pretty much just stacked on shelves and left to sell themselves. The industry is trying to change this untidy approach. Dixie, for instance, provides a rack for its plates so that they can be displayed standing up with their decorations showing. At Keyes, Will Willis has instituted a series of the promotions, coupons, and tie-ins that are standard for other packaged goods but have been missing in paper plates. As befits a 29-year-old vice president with an MBA from Columbia University, Willis takes an aggressive attitude toward his work, which may represent a new state of mind for the industry. Willis gets to the office at six every morning, so he apparently has faith in the future of paper plates.

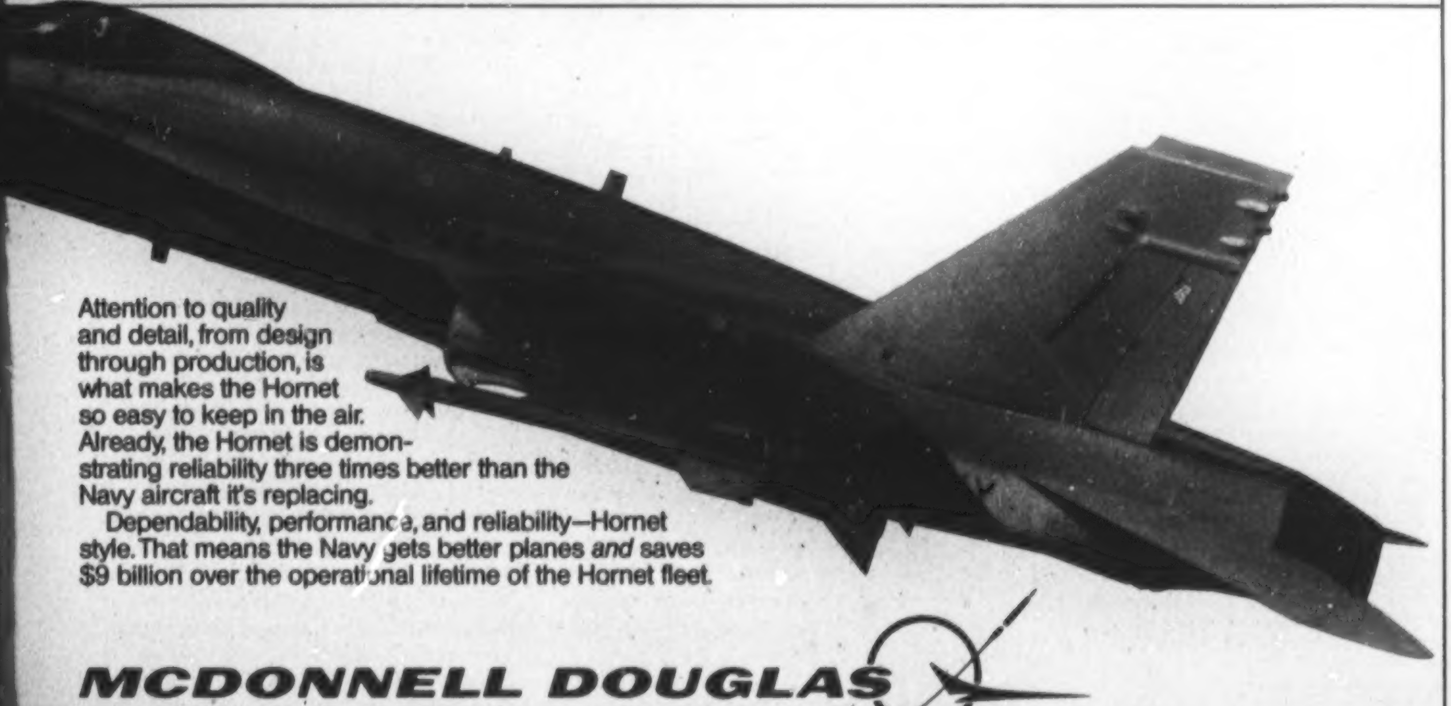
A barrage from St. Regis

The retailers may become more welcoming as TV advertising brings more attention to brand names, if not always to the plates themselves. Mobil got a lot of help last year after it promised $12 million of network advertising for a variety of Hefty products. Dixie and Keyes also advertise their plates nationally on TV. To promote its new lines of plates, St. Regis promised to send out so many TV news clips, radio spots, newspaper features, magazine articles, and press kits that the results would be something St. Regis described as "a barrage of 300 million all-media consumer impressions." But the bandwagon may not pick up many more riders, since other manufacturers feel their margins don't justify the expense.

Who's winning in the plate wars? Hardly anybody, it seems. Not only have Georgia-Pacific and Potlatch dropped out, but Diamond International and St. Regis have barely made sales headway in recent years. Sales of the Lily division of Owens-Illinois have declined. It's hard to know how some of the manufacturers are doing because they are smallish pieces of large businesses. Bondware is the fourth-best-selling brand in the retail market, but its owner, Continental Group, says earnings are "insignificant" in the big corporate picture. Mobil claims Hefty is profitable, but will not break out its figures.

Maryland Cup, an almost pure play in disposables, is the only big independent paper-plate company and the only one to report substantial profits. Last year's sales of $647 million yielded a comfortable return on equity of 14%. The total includes such non-paper businesses as ice-cream

ITS OWN PULSE.



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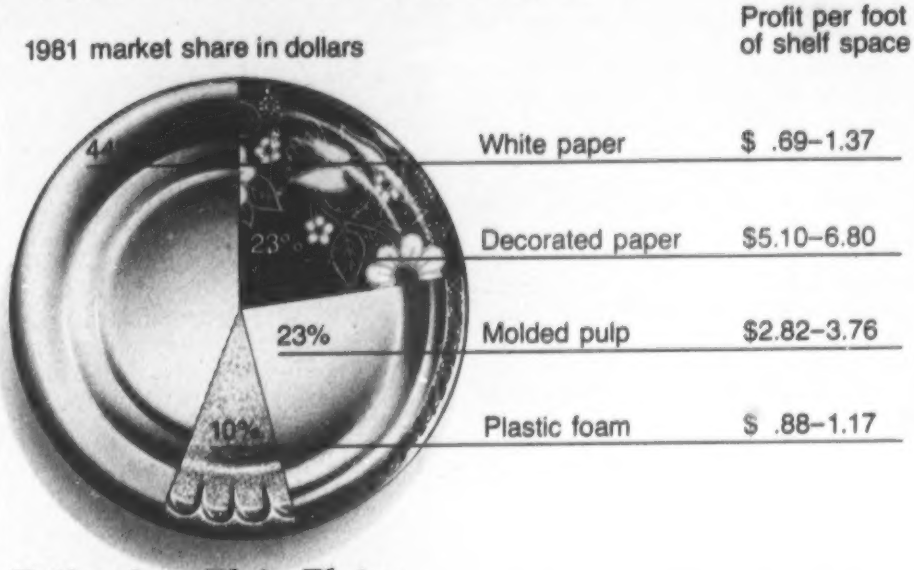

Source: St. Regis Paper Co.

Eating into Plain Plates

The paper-plate industry has been trying for a decade to get customers to forsake plain plates for fancier, high-margin items. As shown in this chart, which depicts sales of standard-sized (9-inch) plates in food outlets, it has partly succeeded. Decorated plates give the retailer the highest return on shelf space for each turnover of stock. Bulkier pulp and foam plates take up more space but turn over briskly, apparently because the public perceives more value in bulk.

cones and plastic straws. A well-established and well-managed company, Maryland Cup concentrates on institutions and fast-food companies, rather than the more competitive consumer market.

The two big sellers to consumers, Dixie and Keyes, both report they are profitable. Keyes had earnings of $12 million on $229 million in sales last year. American Can does not break out Dixie earnings, but sales amounted to $500 million out of American Can's total of $4.8 billion, and Cavalier declares the profits were enough to make him "proud."

However, both Keyes and Dixie are changing hands. Arcata Corp. just sold Keyes to a Dutch drum and container manufacturer, Royal Packaging Industries Van Leer BV. Those masters of the leveraged takeover, Kohlberg Kravis Roberts & Co., were acquiring Arcata itself and said they would *lower* their bid by $1 a share if Keyes were included in the deal. It's a bit like paying the junkman $25 to tow away an old car. Van Leer was able to get Keyes for a bargain price (undisclosed) and Arcata took an after-tax loss of $70 million.

American Can is negotiating the details of the sale of its paper operations, including the Dixie division, to James River Corp., an aggressively growing paper company. Faced with the need to modernize both its paper and metal container plants, American decided it could afford the capital costs of only one and chose its primary business, cans. The company also wants to divert some of its assets into newly acquired financial businesses. James River will acquire the paper operations for $330 million in cash plus $90 million in securities.

Owens-Illinois sold most of its Lily division for book value—about $150 million—last September. The buyer, Lily-Tulip, is a new company formed by the ubiquitous KKR partnership. KKR won't talk about the purchase, but it's safe to assume it is more interested in arranging a profitable turnaround than in a long-term involvement in paper plates.

The near-simultaneous sale of the three companies does not by any means indicate the paper-plate industry is collapsing. But certainly these divisions did not seem as profitable or as promising to their former owners as did other divisions. There's still not much juice there. The supermarkets persist in treating paper plates as a commodity, and bargain mainly on price when the bidding begins every January for what they will sell in the summer. Image building remains a Sisyphean undertaking. "It is," says Amoco's Mazzarelli, "a new ball game every year." ◼

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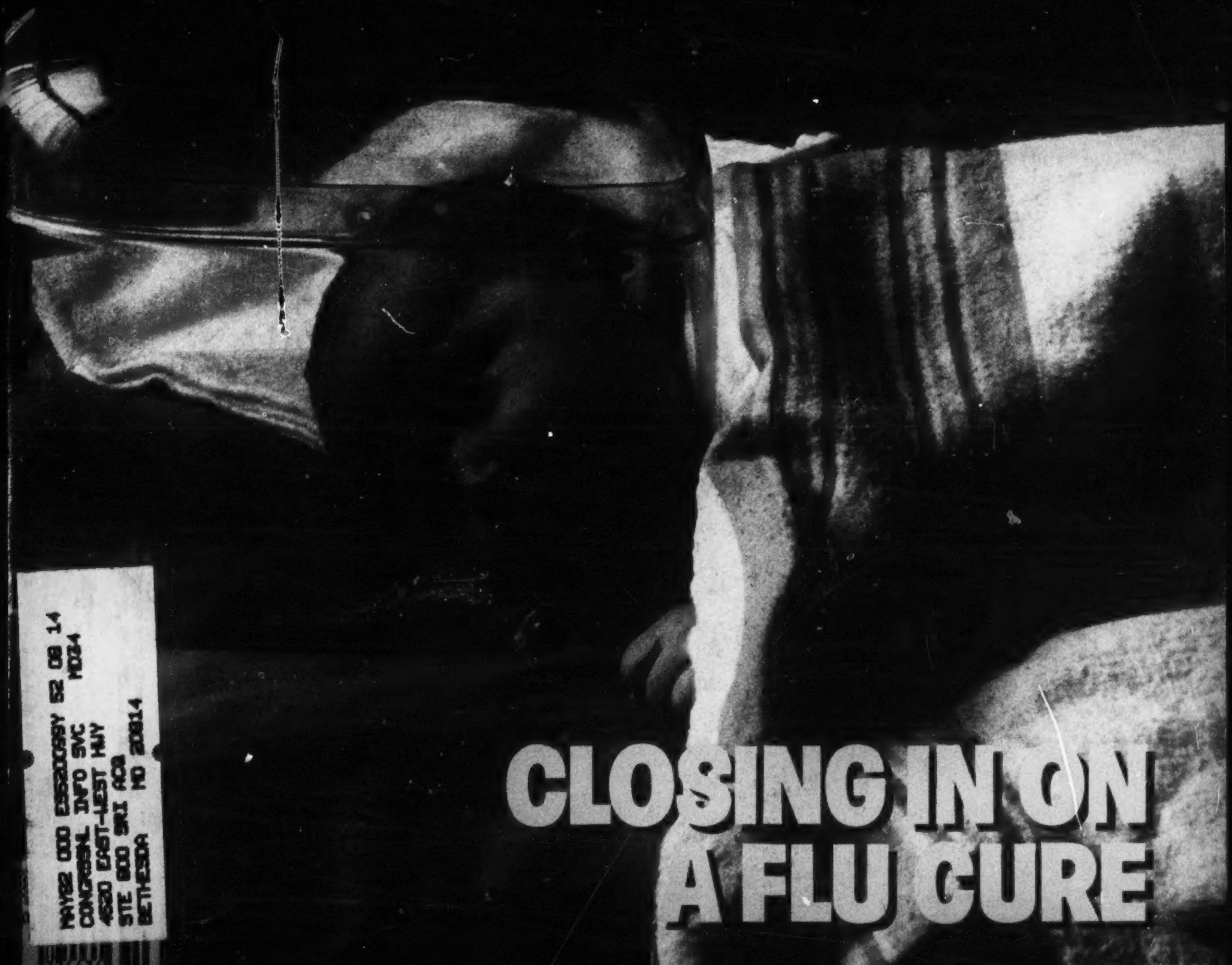

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CLOSING IN ON A FLU CURE

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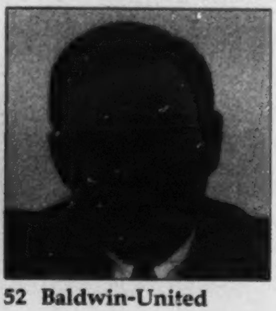

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POLICY

Housing's Unsheltered Future

The Reagan Administration wants the federal government to stop hovering over the industry.

by ROBERT LUBAR

No sector of the U.S. economy, with the possible exception of auto manufacturing, has taken such a savage beating in the last couple of years as that vast agglomeration of construction firms, mortgage bankers, mortgage insurers, and savings institutions that make up the housing industry. Its own special recession, which knocked output and sales to subterranean levels not seen for decades, appears to have bottomed out. But its recovery promises to have much less bounce than in the past, when housing rebounds customarily recharged the whole economy. This time, the ravages of double-digit inflation and wildly oscillating interest rates have compounded the damage dealt by the general cyclical downturn, leaving the industry in need of major structural repairs.

Just as the automakers had to revamp their product lines and marketing in response to OPEC's thunderbolts, so the housing industry will have to develop new sources of capital, and new ways of attracting it, in this transformed economic and financial environment. Old standbys like the 30-year fixed-rate mortgage have gone the way of Detroit's gas-guzzling dinosaurs. The homebuilders don't have to fend off imports, of course, but they've got a problem just as disturbing: how to keep their product from pricing itself out of the market.

One of the most remarkable things about the industry's predicament is the government's reaction to it. Far from rushing in with liberal doses of emergency aid, the Reagan Administration has been signaling a deliberate federal disengagement from the housing business. It has written off programs that subsidize construction as costly failures and is seeking to replace them with more efficient and effective ways to

house the poor. And it is convinced that some other government programs cherished by builders actually inhibit the industry from adapting to new conditions. "We should ask," says one White House staff man, "not what we can do to help, but what we can undo."

A full articulation of the Administration's intentions awaits the final report, due in April, of the President's Commission on Housing, which Reagan set up last June to help formulate a policy consistent with his economic program. Its 30 members include former government officials, bankers, builders, and others familiar with the industry. The chairman, William McKenna, is a Los Angeles lawyer who helped reorganize federal housing programs in the Eisenhower Administration, and the vice chairman is Carla Hills, who headed the Department of Housing and Urban Development in the Ford Administration. The commission's interim reports have indicated that it is taking a detached, pragmatic view of its assignment.

Analyzing the binge

The Administration's attitude, however, is also influenced by the feeling that housing has been too much cosseted in the past, to the detriment of the rest of the economy, and should now be left to fend for itself. Some conservative economists whose advice is heeded at the White House surmise that tax advantages and other preferential treatment have given housing favored access to credit and capital, and lured investment away from industrial plant and equipment.

Whether such diversion actually took place is hard to prove, but an enormous amount of money obviously went into housing. Martin Feldstein, the president of the National Bureau of Economic Research, cites some indicative figures: "The ratio of net investment in residential capital to net investment in plant and equipment rose from 52% in the last half of the 1960s to 76% in the last half of the 1970s."

Certainly, in the 1970s residential real estate was a much better inflation hedge than the stocks and bonds of industrial corporations. As the prices of houses shot to unbelievable heights, homeowners "saved" by watching their equity grow, building up virtually tax-free capital gains, or cashed in their profits by remortgaging their property and using the proceeds to pay for big-ticket consumer items. The conclusion is hard to avoid that this binge deprived the economy of some genuine savings and productive investment it badly needed.

One manifestation of this line of thinking is the serious consideration the Treasury and the Office of Management and Budget gave to abolishing or at least limiting the tax deductibility of mortgage-interest payments, long regarded as one of the most impregnable provisions in the internal revenue code. The slump in housing probably rules out such action now, but the fact that it has become a mentionable topic demonstrates that it is a lot safer to defy the housing lobby than it used to be.

In fact, the industry has been remarkably restrained in its reaction to the change in the political climate. Its leaders seem unwilling to believe that their long-lived special relationship with government is in peril. Housing has been more intimately intertwined with government than any other industry except defense. The nation's commitment to provide adequate shelter was formalized in a 1949 act of Congress that set as a national goal "a decent home in a suitable living environment for every American family." In pursuit of that goal, the federal government poured forth billions of dollars, with results that were good, bad, and indifferent. But its most significant contribution was the array of institutional innovations, some dating back to the 1930s, that became the framework of the modern housing industry. These included long-term, amortized mortgages and much of the organizational machinery to originate them, insure or guarantee their repayment, and provide a secondary market for them. Indeed, it can be said that the government invented the industry.

The long public-private collaboration has to be judged fruitful, on the whole. Americans are surely the best-housed people on earth; two-thirds of all U.S. households enjoy the benefits and satisfactions of owning their own homes. Now the Administration seems ready to close that chapter and to put the industry on its own.

The affordability gap

Its prospects are tantalizing. On the one hand, the inevitable arithmetic of demography is promising a dazzling potential market for new housing. Some 41 million Americans, ten million more than in the 1970s, will be turning 30 during this decade. By past reckonings, they should be forming new households at a rate that would call for construction of more than two million homes every year—enough to assure the industry of a prosperity more bountiful than any it has ever known. But that enticing prospect will be translated into real demand only if those battalions of young homemakers can find housing at a price they can afford.

An "affordability gap" is what is depressing the industry now. If it persists, the Administration will be pressured to fill the gap with hastily improvised subsidy schemes; the National Association of Home Builders came up with a few at its annual convention in Las Vegas a few weeks ago. But the Reaganites seem determined to resist entreaties to shore up the builders. They believe subsidies should be confined to the very poor. And even in this area, the Administration is phasing out some of the more generous programs it inherited and is contemplating replacing them with a wholly new approach.

Four decades of federal housing efforts have cleared away some of the slums and improved inner-city landscapes, but they've done little to relieve the affordability crunch for the poor. According to the

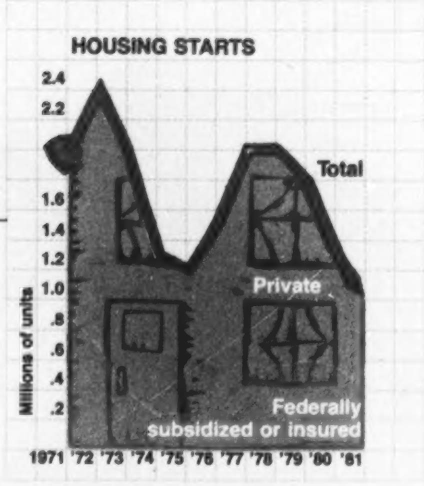
Research associate: Brian Dumaine

Illustrations by Randall Enos

President's commission, well over half the households at the bottom of the income scale pay out more than 30% of their earnings for rent, and almost a quarter of those households pay more than 50%.

Such is the sorry outcome of a policy that emphasized construction subsidies—subsidies paid to the builder to cover part of the land and construction costs or the interest on money he has to borrow. There are several troubles with this kind of subsidy. It is inherently costly because it weakens the builder's incentive to control expenses and because it emphasizes new construction when existing buildings could be made to serve just as well. Its costliness in turn limits the number of projects that can be built, with the result that a few of the needy live better than the rest. And finally, it leaves the government with contracts to pay the subsidy over the life of the building (typically 20 to 40 years). The total amount of future obligations has, in the words of HUD Secretary Samuel R. Pierce Jr., "soared to the point where more than a quarter of a trillion of taxpayers' funds has been committed."

The horror story of the notorious Section 8 program is a worst-case example (see chart, opposite page). On average, each apartment unit built under the auspices of this federal folly costs $150,000 over the life of the contract. HUD has cut back drastically on new commitments, but the budgetary overhang will persist long after the last commitment has been made.



The Builders' Helper

That bent nail tracks the dramatic annual variations in housing starts. From an all-time high of 2.4 million units in 1972, starts slumped during the mid-decade recession, then rebounded to about two million in 1978 and 1979. After that they headed for the cellar, and last year totaled a paltry one million units. The slump is the longest since the end of World War II. Federal aid in the form of subsidies or mortgage insurance went into about 30% of all homes started during the Seventies, but in 1980-81 the figure averaged 40%. The Reagan Administration would like to bring it down drastically.

Let the tenant choose

There is a better way. That's to pay the subsidy direct to the tenant. The President's commission has come out enthusiastically for this consumer-oriented, rather than construction-oriented, approach. Poor people would choose where they want to live and would pay the going rent; the government would pay the difference between that and a stipulated percentage (probably 25%) of the tenant's income. (Presumably there would be a limit on the allowable rent; no one is proposing to house the poor in Park Avenue penthouses.) Such Consumer Housing Assistance Grants (CHAG) would go to the heart of the affordability problem: all of the subsidy goes straight to the intended beneficiaries, who are free to select their own housing. And the dollars go a lot further. Using evidence gleaned from an encouraging ten-year experimental program conducted in 12 cities by HUD, the commission maintains: "Twice as many households can be served at any given level of funding under the consumer-oriented programs as under the construction programs."

Longtime followers of the Milton Friedman school of conservatism will no doubt recognize the strong resemblance between CHAG and the voucher system the professor advocates for education. The idea has strong appeal for Reaganites and could turn out to be their first really interesting initiative in social legislation.

Several tough questions remain to be answered, though. First, who will be eligible? The Administration is anxious not to create another open-ended entitlement by drawing the line at some specified income level. Second, how do you deal with the all-too-likely problem of discrimination? A virtue of CHAG is that it would encourage the dispersal of the poor in middle-class neighborhoods rather than segregating them in grim new ghettos as construction subsidies do. But that assumes they'll be welcome. If they are not, if some poor black family meets resistance, anti-discrimination laws will have to be vigorously enforced.

Finally, what is to assure that enough apartments will be available to accommodate any really significant CHAG program? In many parts of the country, vacancy rates are already very low as a result of a lag in rental construction caused by the failure of rents to keep pace with inflation. Advocates of CHAG concede that it probably won't do much for new construction, but argue that it will spur landlords into renovating run-down properties instead of abandoning them. And saving buildings from abandonment is a much quicker and cheaper way of adding to the nation's housing stock.

When it comes to the mainstream of the housing market, the Administration's evolving policy holds forth no quick comfort for either homebuilders or those aspiring to be homeowners. While the Administration is eager to get rid of the legal obstacles that inhibit the flow of capital to the industry, it is just as committed to dismantling the mechanisms that have given housing preferential treatment in the marketplace for money.

Why the money stopped

According to a perceptive analysis by Anthony Downs of the Brookings Institution, "The true cost of mortgage borrowing declined sharply from about the mid-1960s to about 1978." This happened because borrowers were subsidized by lenders, who remained willing to make long-term mortgage commitments at relatively low fixed rates, even though inflation was depreciating the value of the repayments. The savings banks and savings and loan associations that did the bulk of

As for new sources of mortgage capital, the pension funds are everybody's candidate.

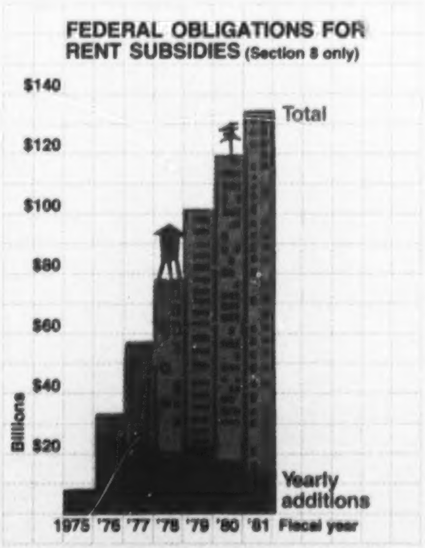
the lending were in turn subsidized by their depositors, who accepted a return on their savings well below the inflation rate.

Then the money stopped. As inflation worsened, the depositors stopped playing fall guy and put their savings into money-market funds. To replace this money the thrifts borrowed at rates exceeding the return on their outstanding loans. Rates on new mortgages naturally shot way up, and lenders began to embrace variable-rate mortgages as inflation protection. But many thrifts have been left with their reserves exhausted and losses on their current operations. Thus ended the system that financed housing for 40 years.

The system that takes its place will not be built on the shaky foundation of small savings deposits; ampler, more stable sources of mortgage funds will have to be tapped. As for the shattered thrift institutions, the prescription for their return to viability calls simply for more freedom—freedom to take on corporate accounts, for example, and to diversify their asset portfolios by going into consumer and commercial loans, investing in real-estate equity, and buying municipal bonds. This approach was endorsed by the President's commission in a preliminary report in January. It is a good illustration of how government can help by "undoing," for it is federal legal restrictions that have kept the thrifts in their present furrow.

Some of the builders are far from delighted with the idea. They fear that, once liberated, the thrifts would leave the mortgage business in the lurch. The savings bankers themselves are reassuring on that score; they have no intention of abandoning, en masse, what they know best. And, as the commission noted, "A strong industry that devotes a smaller portion of its portfolio of assets to mortgages could be a better source of housing funds than a weak industry fully committed to mortgage investment."

Legislation liberating the thrifts is high on the agenda of the Senate Banking Committee, whose chairman, Republican Jake Garn of Utah, has become a passionate advocate of bank deregulation across the board. He's been having a hard time, however, convincing commercial bankers that they have nothing to fear from letting the thrifts loose in their lending pastures. Says Garn: "I've been on a campaign telling these people that the real competition is going to come from the new financial-service giants, and if you don't think that's real competition, wait until Sears is offering money-market funds in all of its mail-order outlets." Specialization is swiftly becoming obsolete in the evolving market for financial services, and the lawmakers will have to catch up.



Mortgaging the Future

Since 1975, when HUD instituted the Section 8 program to spur construction of low-income rental housing, the government has committed itself to pay out a dizzying $136 billion in subsidies over the next 30 to 40 years. The program guarantees landlords a "fair market value" rent and makes up the difference between that and a stipulated portion (on average, 30%) of the tenant's income. In cities where rents are high, Uncle Sam will end up paying $250,000 per unit (in 1981 dollars). Other federal programs for housing bring the taxpayers' total obligations for subsidies to a whopping quarter of a trillion dollars. HUD now wants to end the Section 8 construction subsidies.

As for new sources of mortgage capital, the pension funds are everybody's candidate. With some $600 billion in assets, they represent a vast and steadily growing reservoir of investable funds. Since their liabilities (obligations to pay retired employees) are characteristically very long term, they are less concerned than bankers with gyrations in interest rates. Yet only a minute fraction of pension money has been invested in home mortgages.

The principal obstacle has been the Employee Retirement Income Security Act of 1974 (ERISA). Its rigid conflict-of-interest rule has barred the construction industry's retirement funds, for example, from investing any of their $20 billion of assets in housing. In addition, some mortgages do not meet the act's definition of investments a "prudent man" would make. Amendments to ERISA have been introduced in Congress, and the Labor Department is moving to liberalize the rules governing investment in residential mortgages.

Double protection

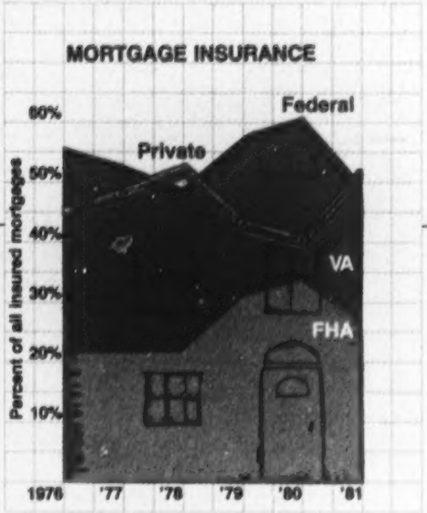
As they move more and more into housing, the pension funds and other big institutional investors wouldn't be bothered with the details of dealing with home buyers, checking their creditworthiness, and servicing individual loans. That would be handled by S&Ls, commercial banks, mortgage bankers, securities firms, and maybe even retailers. Lendable funds would be generated by bundling mortgages into packages and selling them to pension funds and other investors in the form of pass-through securities that can be publicly marketed like bonds. These securities would resemble mutual funds in that the composite yield on a portfolio of mortgages is passed through to the investor.

Pass-through securities are already a reality, of course. They've been a hit with investors ever since they were first introduced by the Government National Mortgage Association in 1970. "Ginnie Maes" have a special appeal because they are doubly guaranteed by the U.S. government. The mortgages that they represent are insured by the Federal Housing Administration or guaranteed by the Veterans Administration, and the securities themselves are backed by the full faith and credit of the government. All together, investors hold more than $120 billion of Ginnie Mae securities.

Alas, Ginnie Mae's very success caused the agency to run afoul of David Stockman's OMB, which this winter lowered the ceiling on the agency's annual commitments. There have even been rumors that OMB intends to phase the agency out entirely. That's been denied, but OMB has passed the ominous word that "the future of Ginnie Mae beyond 1983 has not been decided." FHA's fate also hangs in limbo.

This isn't a simple budget matter: Ginnie Mae actually makes a little money for the Treasury. The problem is that ironclad government guarantee. As part of what it calls a "credit-budget exercise," OMB has its ax out for off-budget federal loan guarantee programs of all kinds. Last year these programs took on a net total of $30 billion in guarantees—covering over 7% of all the money borrowed in this country—and Ginnie Mae accounted for a hefty slice of that. What troubles OMB is that the system gives housing a special advantage over other industries lining up in the credit market: securities with a federal guarantee can be sold even in the shakiest markets. OMB would have no objection to Ginnie Mae if it were "privatized"—that is, if the government guarantee were stripped off its securities.

When word of OMB's intentions got around at the end of last year, the housing industry was finally moved to protest. The National Association of Home Builders, the Mortgage Bankers Association, and the National Association of Realtors denounced plans to "dismantle" Ginnie Mae and FHA as "reckless, deceptive, and unjustifiable." The three trade groups make up one of Washington's most formidable lobbies, and they could blow up a fearful brouhaha in Congress.



Catching Up

From 1934 until the late 1950s, when the first modern mortgage-insurance company started up, the U.S. government was the only insurer of home mortgages. Now the private insurers have caught up. The insurance is sold primarily on higher-risk mortgages (for example, those on houses bought with down payments smaller than 20%). It enables lenders such as S&Ls to sell the mortgages in the secondary market. The Administration would like to see private insurers take over the bulk of the business now handled by the Federal Housing Administration. VA insurance wouldn't be touched.

A privatized Ginnie Mae would have to compete on more equal terms in the growing market for conventional pass-throughs. Such securities have been marketed by commercial banks, S&Ls, and mortgage bankers since 1977. Their combined offerings have doubled during each of the past few years, and the cumulative total reached nearly $9 billion at the end of the third quarter of 1981. Recently the Federal National Mortgage Association (Fannie Mae) began marketing pass-throughs patterned after Ginnie Mae's but without the federal guarantees. Fannie is stockholder owned and almost, but not quite, independent of government.

Milwaukee MGIC

The chief instigators of all this activity have been the dozen or so private mortgage-insurance companies that stand behind the private pass-throughs. They have done a lot of growing since Max Karl founded MGIC, the first modern mortgage insurer, in Milwaukee 25 years ago (see the article on page 52 about Baldwin-United, which is planning to buy MGIC). The industry could handle most of the business it would get if government competition were removed from the scene. As it is, the private insurers have made deep inroads into FHA's share of market, and not by skimming the cream off the top. They have been underwriting more mortgages than FHA at the higher-risk end of the scale. A report by Arthur D. Little Inc. in 1975 confirmed the insurers' contention that they could withstand almost any shock, even approaching the kind of default scenario that would come with another depression. A more recent Little report takes a more qualified view on the grounds that new developments in mortgage instruments introduce a higher degree of uncertainty.

The builders have great respect for the private insurers. Nevertheless, defenders of FHA and Ginnie Mae can work up quite a passion in recalling how low-down-payment, government-backed mortgages brought homeowning within reach of the mass of Americans. The guarantee, they maintain, is just as vital today. It is the most dependable generator of mortgage funds available, and it is making some mortgages a little cheaper; interest rates on Ginnie Mae securities are about half a percentage point lower than those on nonguaranteed pass-throughs.

Since high monthly carrying charges are the No. 1 villain of the current housing mess, no one in Washington would argue for a policy that would make mortgages costlier or harder to get. Rather the Administration is making a point that transcends housing. The point is that most industries, including housing, can thrive unaided in a healthy economy. As an OMB spokesman put it, "All the Ginnie Maes, Fannie Maes, FHAs, and VAs put together have not prevented the worst housing slump in history. It's interest rates that are doing the damage." Bringing rates down, which implies getting control of inflation, could be the only special favor housing needs. ■

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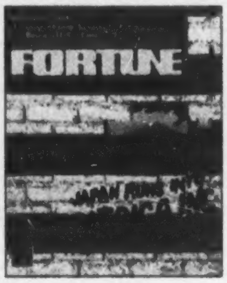

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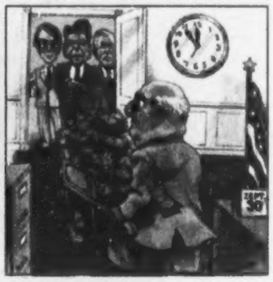

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A Champ of Cheap Airlines

Rock-bottom fares and savvy marketing are fueling a steep lift-off at People Express.

by PETER NULTY

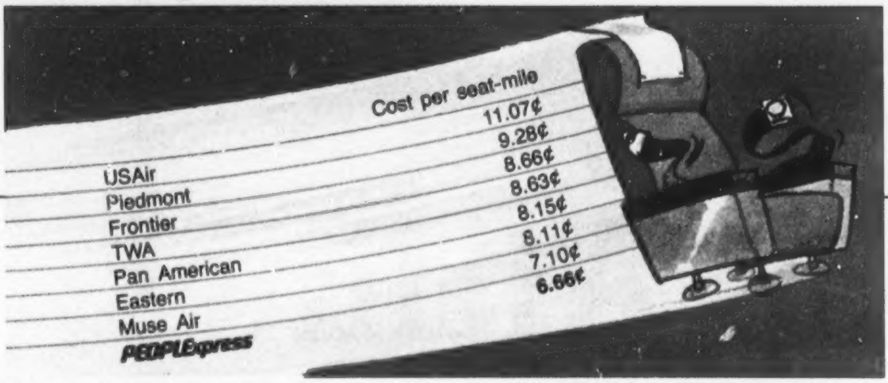
In the last three years airline executives have flown into deregulation, two recessions, the air-traffic controllers' strike, and exhausting price wars. Last year, the worst in airline memory, the U.S. industry had operating losses of around $300 million. There are fears that some airline companies—Braniff and Republic are frequently mentioned—could go out of business. The turbulence aloft isn't confined to American carriers. Sir Freddie Laker's Skytrain went down on the North Atlantic last month. But in a dingy suite of offices in Newark Airport's old North Terminal, People Express Chairman Donald C. Burr, 40, smiles as though a party is beginning.

One of a half-dozen jet-flying airlines born of deregulation, People Express has executed the fastest takeoff of any. The company started last April with three Boeing 737s traveling from Newark to Buffalo, Columbus, and Norfolk. By year's end it had 13 of the planes flying to ten cities and was surpassing the older fledglings, Midway and New York Air, in the number of miles it carried paying passen-

Chairman Donald Burr, shown in the pilot's seat of a People Express 737 at the company's austere Newark headquarters, sets a cost-cutting course.

Photographs by John Chao

What a Tight Fist Can Do



"You don't keep costs down by counting pencils and paper clips," says Larry Martin, a People Express general manager. "You have to squeeze massive productivity out of people and planes." People squeezes with the best. The figures represent the average costs per seat, per mile flown in 1981 by a sampling of airlines; annual figures are not yet available for many lines. The list includes three regional companies (USAir, Piedmont, and Frontier), three major trunks (TWA, Pan Am, and Eastern), and two new low-cost jet commuters (Muse and People).

gers. People Express flew 95 million revenue-passenger-miles in December, when New York Air flew 64 million passenger-miles and Midway 45 million.

People is the busiest airline at Newark Airport, with 72 departures and landings a day. Although the company lost $9 million on revenues of $38 million last year, it made a profit in December, its eighth month of flying—about $500,000 on revenues of $9 million by FORTUNE estimates. (In January, a slow month for air travel, People slipped back into the red.) Hambrecht & Quist, the venture-capital firm that underwrote People's public offering of three million shares in 1980, predicts the company could make as much as $10 million in 1982 if the air-travel market improves, as Hambrecht & Quist expects it to do later this year.

A wizard departs

People's prideful chirps of progress missed a few beats two weeks ago when President Gerald L. Gitner, 36, moved to Pan American as that troubled airline's senior vice president of marketing and planning. Gitner had held a similar position with Texas International before quitting to form People Express in April 1980 with two other Texas International employees, Burr and Melrose K. Dawsey, 33. A wizard of marketing and route selection, Gitner skipped about People's tiny headquarters like a kid in a wading pool, with an infectious spirit of fun and adventure.

Fortunately for People, Burr has a record that suggests he can fly solo. A Harvard Business School graduate, he left the presidency of a New York investment firm that invested solely in airlines to join Texas International in 1973, when it appeared to be going down the tubes. Seven years later, when he left to help found People, he was president and chief operating officer and Texas International had been turned around. Burr is the largest stockholder of People, with 715,000 shares. (Gitner has 330,000 shares. Dawsey, who is People's director of administration, has 41,000 shares, and five other officers have 50,000 shares each.) Burr views air travel with glib good humor as a commodity product like "steel, tennis balls, and dead chickens." He pooh-poohs such airline frills as hot meals and free magazines. "To be a winner," he claims, "you have to have the ultimate frill—nice people."

To keep spirits from sagging among People's people, Burr spent the day after Gitner announced his departure in company meetings explaining the move. Says Burr: "Our folks were saying, 'We thought you guys started something new and better. Why should we stay committed if the president is going to leave?'" Burr's answer: "Gerry loves planning and that's already done at People Express." Gitner concurs: "People went from zero to $82 million in assets in a year and a half. It's not a start-up anymore."

The ingredients of People's early success are hardly secret: rock-bottom fares and savvy marketing. People may have had the lowest costs of any airline in the country in 1981 (see chart, at left). In December People's cost per seat for each mile it flew fell to a phenomenal 5.4 cents, compared with, for example, 9 cents for Piedmont that month. General Manager Larry Martin, 33, says People's cost could fall below 5 cents when the airline adds three more planes to its fleet this month.

The company passes its economies on to passengers, who pay only 9.3 cents a mile for their tickets. According to Goldman Sachs, in the first nine months of 1981 two companies that compete with People on some routes were charging a system-wide average of 16.1 cents a mile (Piedmont) and 18.6 cents (USAir). People's stunningly low fares have forced other airlines to match its prices on competitive routes, even though their costs are higher. In April, for example, Piedmont was charging $82 for a ticket from Newark to Norfolk. When it heard People was going to fly the route, Piedmont slashed fares to meet those of the interloper—to $35 in peak hours and $23 at other times. The fare war is still raging.

The BSA special

To drive home its price message, People is putting on a mischievous ad campaign poking fun at other airlines and their patchwork quilt of fares. In one TV commercial, a reservation clerk at a fictitious competitor tells a customer: "You want the BSA Airlines super low-price special. OK? You simply fly one way, and pay the price you pay the other way if you fly two ways. OK? Simply put, each way costs half of either way, both ways, some days. OK?"

People probably couldn't survive solely by wresting market share from more established companies. In some cases, its competitors have customer recognition and the financial strength to withstand losses on selected routes indefinitely. When People started flying from Newark to Indianapolis it charged only $79 a ticket in peak hours, $59 off-peak. TWA and USAir, which were charging around $150 between New York and Indianapolis, matched People's prices. People couldn't drum up enough passengers and soon

continued

Research associate: Edward C. Baig

One Up, One Out

Melrose Dawsey (above) was an assistant to the chairman at Texas International when she helped found People Express. Now People's director of administration, she often fills in selling tickets in flight. Another founder, Gerald Gitner (right), has gone to Pan Am. He says People Express is in good hands: "After all, I trained them."

dropped the route. Says Burr, "We got blasted out of there." TWA and USAir have lifted their fares to $162.

Instead of taking passengers off competing planes, People hopes to lure them from the roads and rails on routes where there is a lot of ground traffic and not much airline service. In effect, People wants to preempt Greyhound's slogan, "Leave the driving to us." People Express ads read: "Flying that costs less than driving." A ticket from Newark to West Palm Beach, for example, costs $89 in peak hours and $69 off-peak. A bus or train ticket is more than $130. The trip by car—figuring 20 cents a mile and not counting food and lodging—costs about $250.

Enticing ground-lovers into the skies seems to work. After People started flying to Norfolk, a local newspaper reported that Greyhound sharply cut its service to the city and its environs, citing a decrease in ticket sales. Meanwhile, Norfolk airport traffic increased 18%.

Superman does it

Two kinds of travelers like People's fares: those with little money and those with plenty of money who would like to keep it. Senator Ted Kennedy was a passenger from Baltimore to Florida in December; his niece Caroline flew in February. Christopher Reeve, who played the title role in two *Superman* movies, took People from Newark to Boston. (You would think he could have flown still cheaper on his own.) On the planes, briefcases mix with backpacks, blue jeans and sailors' bell-bottoms with pinstripes. The cabins are clean, the seats close together, and the attendants refreshingly chipper. It's like a McDonald's of the air.

People has federal rule-making to thank for its price advantage. For years the Civil Aeronautics Board set fares based on average costs of the industry and prevented new competition from entering the business. Companies competed on service, not price. The high cost of providing the service (and of generous wage contracts) was easily passed along to travelers through regulated rates. After Congress changed the rules in 1978, it was a simple matter for newcomers organizing from scratch to move in with efficient operations.

No airline has done more than People Express to pare away extras. The first thing experienced travelers notice when flying People is that a lot of services they used to take for granted are either optional or have been eliminated. There are no hot meals; passengers must buy their snacks and beverages (beer and sandwiches cost $1; coffee is 50 cents). People Express takes reservations by telephone, but it has no ticket desks in the terminals. Nor is People hooked up to the industry's interconnected computerized ticketing systems. All tickets are sold on the plane. Unbundling these services alone knocks at least $18 off a ticket price.

Passengers are encouraged to carry their luggage on board; the planes are designed to take two small suitcases per passenger in the cabin. Bags can be checked before boarding—for a fee of $3 per bag. But checked luggage is not transferred to other airlines, making it necessary for passengers to pick up their own bags if they are connecting with other flights. The chief complaint about the luggage policy has come from the operators of the Columbus airport; all that bag-toting by People passengers was wearing out the carpet. The Columbus *Citizen-Journal* responded with a ringing editorial ("Get off People's back"), which advised the airport to "get some carpet that will last."

Lopping off the frills—some would call them necessities—is only the beginning of People's cost-cutting design. The company slashes far greater costs out of basic plant, equipment, and personnel. The founders selected Newark's nearly abandoned North Terminal because there was enough cheap space in the building for

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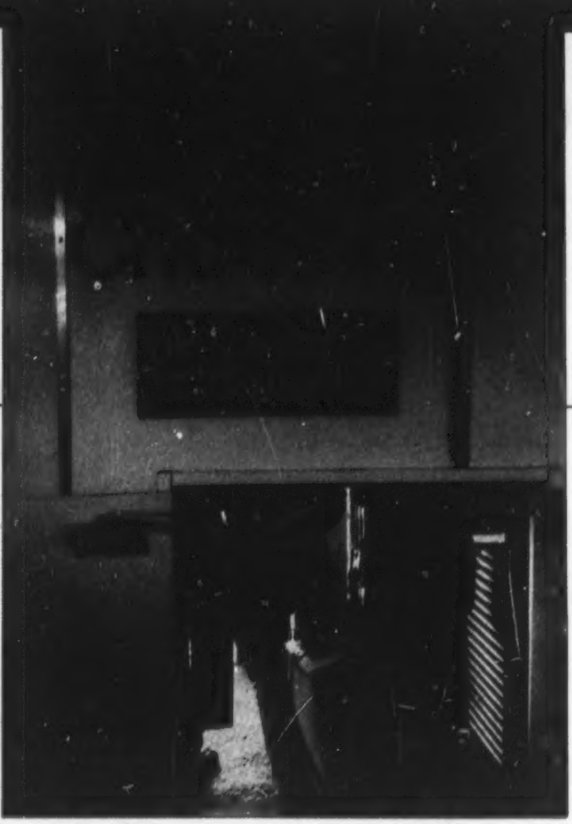

People Express urges travelers to carry their own luggage on board and charges if they don't.

their entire headquarters, from reservation switchboards to corporate cubbyholes. Chairman Burr's spartan office, which doubles as a boardroom, rents for $6 per square foot a year; in the Pan Am Building in midtown Manhattan, space goes for about $50 a square foot. Rental fees for People's eight boarding gates are less than half those charged at Newark's ultramodern new terminal a half-mile away.

People Express works its sedate-looking tan, brown, and, maroon fleet hard. Its 737s were purchased from Lufthansa for $3.7 million each. (A new 737 costs as much as $17 million.) When Lufthansa flew the planes, each had 90 seats and a galley for hot meals. People took out the galleys and the first-class sections and added 28 seats per plane. A People 737 flies between ten and 11 hours a day, three or four more than the industry average. The additional seats and flying time more than double a plane's productivity without adding to capital costs. On the average, the planes fly 58% full—a good showing.

People gets as much out of people as it does out of planes. The company has about 800 full-time employees, or 57 per aircraft; the industry as a whole has about 149 people per plane. The secret of People's high labor productivity is not large amounts of overtime, but versatility. Because the company is not unionized, People's employees can be moved around to ease a crunch when one occurs. Each employee is trained—and is willing—to perform many tasks. Pilots fly about 70 hours a month (the industry average is around 45), but they also work as instructors, dispatchers, and schedulers.

Flight attendants are called "customer service managers"; they may spend one week a month looking after passengers aloft and the rest of the time taking reservations or keeping the books. Even executives like Melrose Dawsey regularly leave their desks to sell tickets and serve coffee. Burr, who occasionally pitches in to take reservations, claims this flexibility reduces the number of people on the payroll by at least 10%. Signs taped on corridor walls at headquarters announce: "Reservations needs help at peaks on Thursdays. Sign up, schedules permitting."

In a lot of companies an open-ended call for volunteers would fall on deaf ears. But People employees have an incentive to respond—all, even the newest recruits, are stockholders. People may be the only publicly held company that requires every new employee to purchase 100 shares of stock, at a discount of about 60%. About a third of the company's 4.5 million shares are owned by employees. The stock, offered over the counter, has been hovering around $8.50 a share, exactly the price at which it was issued 16 months ago—not bad in this market.

Some get more

In this People's army, the officer staff totals 15 people. None is a vice president—a remarkable omission in the V.P.-prone airline industry. No one, not even Burr, has a secretary. Burr recalls that when he became president of Texas International in 1976, TI had a corporate staff of 350 and monthly revenues less than People's revenues today.

The company's brass doesn't pay itself excessively. Burr gets $48,000, as did Gitner before his departure. (He won't say what he will be paid at Pan Am.) People pilots earn $30,000 a year to start, compared with an average of $60,000 for members of the Air Line Pilots Association. Other People employees are paid *more* than the going rate for their positions. For example, customer-service managers start at $17,500 a year, well above entry-level pay for flight attendants at other lines. "This is a very democratic company," says Burr. "We've leveled the compensation scales and we intend to keep it that way. We want people motivated by feelings of ownership and peer pressure."

Being lean and entrepreneurial, People was able to move with remarkable speed at two crucial times in its short history. In January 1980, when the company set up shop in Newark, the headquarters-to-be was little more than a shell infested with rats. Only eight employees were on the payroll. Within four months the founders hired and trained 200 people, and People took to the air on schedule.

The second crucial time came after the air-traffic controllers' strike began in August. Access to most airports was restricted, and People had to abandon plans for flying some routes. The company couldn't afford idle planes, so a new strategy was hammered out during two emergency sessions over Gerry Gitner's dinner table in Morristown, New Jersey. The airline decided to start flying to Florida from smaller cities as well as Newark. Within weeks, People Express was originating Florida flights in Buffalo and Columbus. Business was good, and direct Florida flights largely accounted for the company's profitability in December. Burr says a major airline would have taken months to start flying the new routes.

When he was looking for financial backing a year ago, recalls Burr, investors laughed at his choice of Newark as the principal terminal, "and they thought charging passengers for food and drinks was even funnier. Everybody knows it's coffee, tea, or me—for free. Right?" These days it's Burr who is laughing. ■

Profit Pressures on the Big Law Firms

Merrill Lynch's Latest Bombshell for Bankers

International Harvester's Last Chance

C8400-1 4/1/82

$2.50 April 19, 1982

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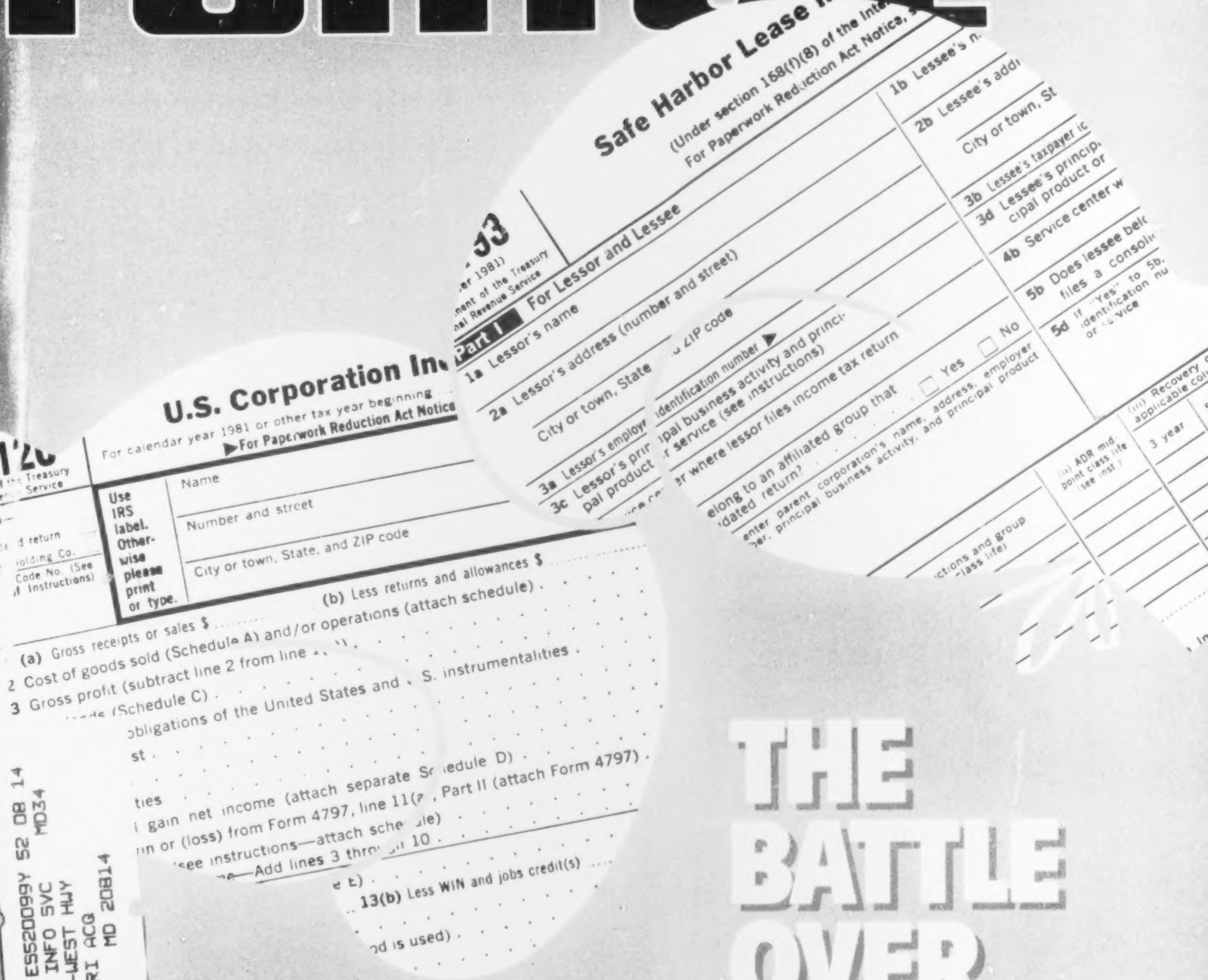
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FORTUNE

THE
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The boxing gloves on the cover—designed by art director Ronald N. Campbell—suggest the spirited scrapping between businesses defending their tax benefits. For a report from ringside, see page 58.

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ACKNOWLEDGMENTS

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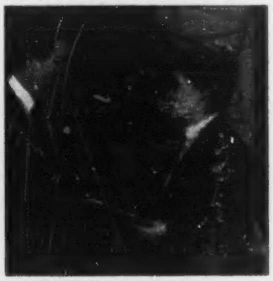

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CHEMICALS

Dow Plans to Keep Growing in Europe

The European chemical industry is troubled with excess capacity and shrunken profits, but one company remains undismayed.

by ROBERT BALL

In the European chemical industry these days, happiness is breaking even. The past two years have been the worst since the recovery from the ruin of World War II. Among the companies losing money are not only chronic problem cases like Montedison and Rhône-Poulenc, but also the Dutch Akzo Group and the chemical divisions of Shell and British Petroleum. Most of the rest, including Imperial Chemical Industries and the leading West German companies, have reported sharply reduced earnings.

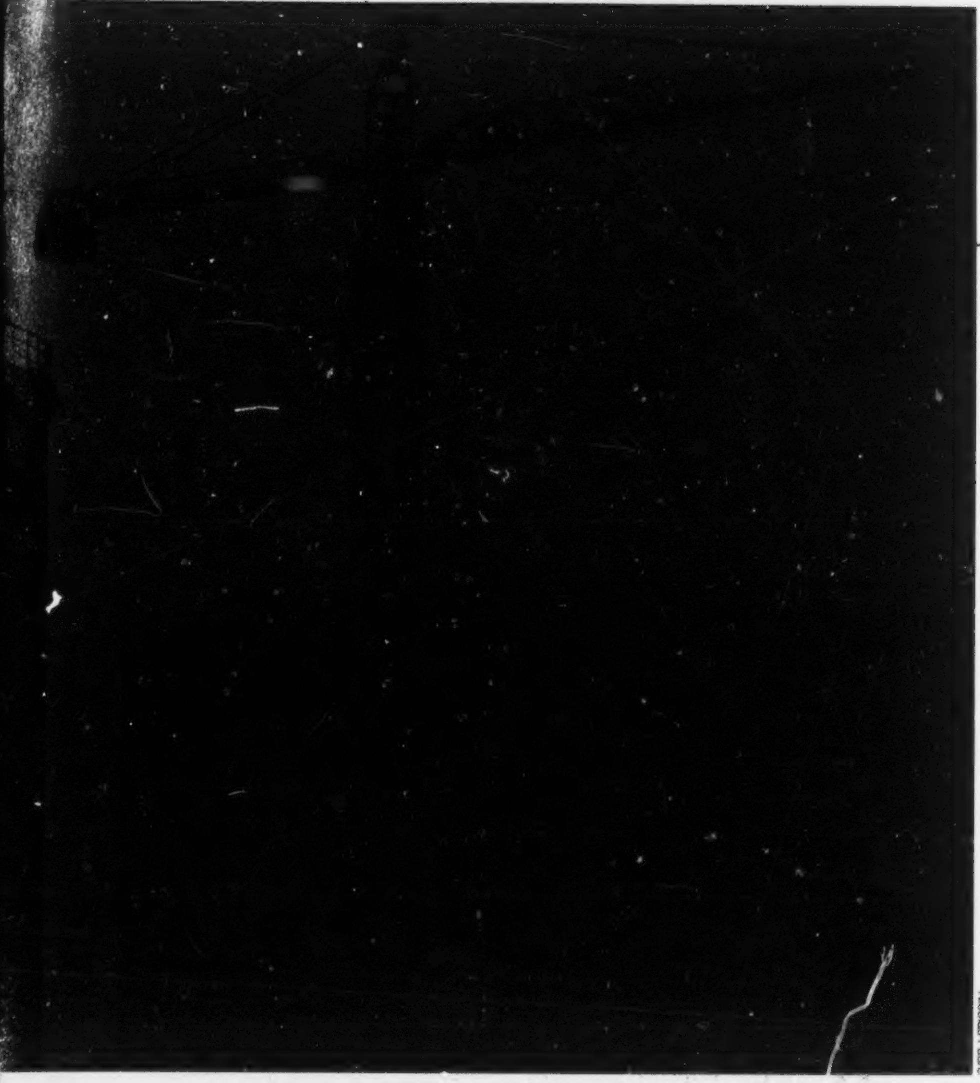
Bulk chemicals, plastics, and synthetic fibers have all been money losers, with industry losses on plastics alone reportedly running at $200 million a month. Overcapacity weighs heavily on prices. Western Europe has enough capacity to turn out 18 million metric tons a year of ethylene—the basic petrochemical building block—in a market currently absorbing only about 13 million tons. Moreover, Eastern Europe, frantic for hard currency, is pushing its products West at almost any price, while just over the horizon loom the new Mideast petrochemical plants that will get their feedstock virtually for nothing.

A pattern of retreat

Add lofty labor costs to this picture and it's no wonder American chemical companies have been cutting back in Europe. Monsanto and Union Carbide have sold off substantial European operations and Tenneco is seeking a buyer for a British subsidiary. Gulf Oil searched unsuccessfully for someone to buy its European chemical plants, and will now simply close them down.

One U.S. chemical company, however, remains undismayed, even confident, about the prospects in Europe—Dow Chemical of Midland, Michigan. Over the years the European branch has become a huge and fully integrated chemical company itself. Its sales of $3.3 billion last year accounted for 28% of the parent company's total worldwide sales. (See chart, page 76.) In a normal year Dow Chemical Europe also contributes a hefty share of overall corporate profits.

Last year was not normal, though Dow Europe did manage the impressive feat of making a profit on plastics. Operating income, $135 million, was less than half the previous year's, and the $80 million contributed to corporate profits came to not much more than a quarter of the 1980 figure. Yet Dow continues to invest $200 mil-



These two new storage tanks at the Dow Europe complex at Terneuzen in the Netherlands will each hold 50,000 cubic meters of LPG—liquefied petroleum gas. It's used as a feedstock in the production of petrochemicals.

Nicolas Faure

lion to $300 million in new money in Europe every year, plus a European R&D budget approaching $100 million annually. Is the company just being stubborn, or does it know something others don't?

What Dow Europe President Frank Popoff and his lieutenants think they know is that lean and nimble companies can still make good money in the European chemical business. The winners will be companies that keep costs under control and grab the growth markets—in pharmaceuticals, in plastic packaging (as the energy-intensive tin can and glass bottle disappear), in automobiles (weight-saving plastics), in insulation, in substitutes for pulp-based paper (an energy gobbler), and in sophisticated agricultural chemicals. Most of the growth, then, will come in petrochemicals. The oil glut and declining energy prices narrow the petrochemical advantage over more energy-intensive competing products, but also pull down prices of petrochemical feedstocks. Apparently persuaded that the buyer's market in oil will last, Dow just announced an agreement to sell its own oil and gas properties in the U.S. for about $400 million.

Popoff and his team are not alone in their conviction that Europe remains a sound base for well-run chemical companies. Some months ago a new contender reared up with the formation of Enoxy, a joint venture of Occidental Petroleum and ENI, the state-owned Italian oil and chemical group. That deal too has a Dow angle. The instigator, Zoltan Merszei, vice chairman of Occidental, was president of Dow Europe during the heroic growth years of the Sixties, and his stated goal is to carve out for Enoxy a Dow-sized slice of the European market. It won't be easy.

Popoff, 46, is a different type from the authoritarian Merszei. He has a breezy manner and the gift of gab. He himself offers a somewhat mysterious explanation for his casual style: "I was born in Bulgaria, so I'm naturally democratic." His father, a colonel in the Bulgarian Army before he moved to Terre Haute, Indiana, and opened a dry-cleaning business, retained business interests in Bulgaria, and it was on a trip to the old country that Frank was born. Such cosmopolitan backgrounds are not unusual in the upper reaches of Dow management. Merszei came from Hungary. Paul Oreffice, chief executive of the parent company, was born in Italy.

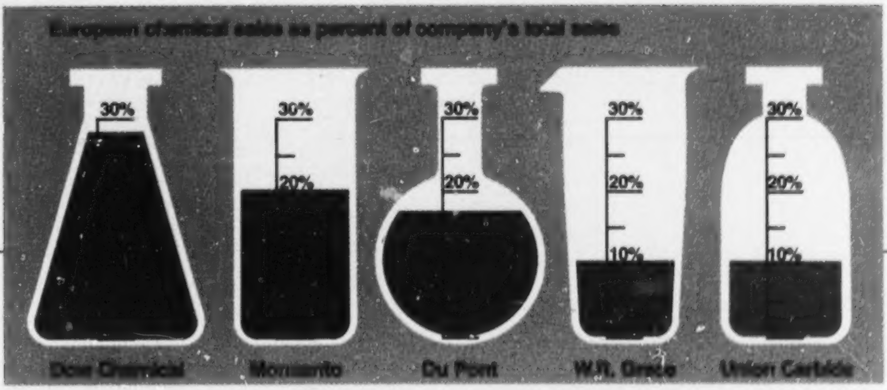
In a never-ending search

Dow's unorthodox strategy of making Europe a major manufacturing base and continuing to expand it aggressively when the talk in the European chemical industry is mostly of overcapacity and shrunken profits depends crucially on keeping costs competitive. Without a link to any oil company, Dow has always had to shop around for its feedstock, and the company has developed multiple sourcing to a fine art. To feed its cracking facilities in Terneuzen, Netherlands, and Tarragona, Spain, Dow Europe buys naphtha from the Total refinery near Terneuzen, but also on the Rotterdam spot market and under long-term contracts from Saudi Arabia and other supplier countries, including the Soviet Union.

In its never-ending search for economy and flexibility, the company places increasing emphasis on liquefied petroleum gas, called LPG in the trade, and on condensate. Unlike naphtha, neither is a product of oil refining. LPG, familiar to campers as bottled gas, is a natural byproduct of crude-oil output. A mixture of propane and butane gases, it can be separated and transported as a liquid. Condensate is the "wet" part of some natural-gas streams; it can be liquefied by pressure without refrigeration.

Dow has modified crackers to accept

A1250-1,225 has data for chemical and total sales for these companies but nothing for European chemical share.



Dow Chemical's Already in Deep in Europe

Dow leads its American peers in European chemical sales as a proportion of total corporate sales of all products. If the chart showed European chemical sales as a proportion of worldwide chemical sales alone, Dow would still be first, but W.R. Grace would rank second. The figures include relatively small amounts of sales to Africa and the Middle East—usually handled by the European branch.

these alternate feedstocks as well as naphtha, so that a plant can use whatever is cheapest. At present, with oil prices depressed, the advantage of such flexibility is not so wide, but it remains valuable insurance against rising oil prices and the rising naphtha prices that go with them. Moreover, seasonal swings favor LPG and condensate during part of the year. By its own reckoning, Dow Europe saved between $10 million and $15 million last year by running these alternate feedstocks part of the time. Dow claims to be ahead of the competition in its technology for processing liquid gases, and its deep-water coastal cracker sites provide a lasting advantage, since LPG is delivered in ships the size of aircraft carriers.

Worry about a tidal wave

Even better than being near the sea is being near a copious supply of oil or gas. In a joint venture with Sabic, Saudi Arabia's industrial arm, Dow is building a petrochemical complex at Jubail on the Gulf coast, based on ethylene output of 500,000 tons a year. A pipeline system already in place will bring in cheap feedstock: ethane gas hitherto wasted by flaring. Popoff sees the Jubail complex as part of an inevitable geographic shift of basic chemical production to where the feedstock is. "Dow has always moved to new locations," he says. "We've chased feedstock all over the world and benefited thereby. Those who stay behind are often the losers."

Exxon, Shell, and Mobil are also building petrochemical facilities in the Middle East, as are the Japanese. Some people in the chemical industry worry that a tidal wave of cheap ethylene could roll over world markets when all these plants come on stream in the second half of the Eighties. Popoff thinks the amount of disruption will depend on how the marketing is handled. Initially Dow will sell on behalf of the Saudis. Says Popoff: "We have a role to play in showing our partners that better prices can be gotten if the product is not simply unloaded onto resellers."

In manufacturing as in refining, Dow Europe puts a lot of emphasis on holding down costs. Sales per employee, a rough measure of efficiency, amount to $250,000, more than twice the median for the chemical companies on the FORTUNE 500. In his efforts to pare production costs, manufacturing boss Irving Snyder Jr. runs a fierce internal competition among his plants. Over a period of six years one stellar performer, the Styrofoam plant at Drusenheim on the French bank of the Rhine, nearly trebled output—and more than halved energy consumption per unit of output—without adding a single employee. This was done largely through a succession of design improvements in manufacturing equipment.

Styrofoam, a trademarked end-use product with sales of about $100 million a year, nice profit margins, and rapid market growth, points the way Dow Europe intends to go. For a company still regarded as mainly a producer of commodity chemicals, it has already come a long way. Pharmaceuticals, agricultural chemicals, and specialties such as Styrofoam will provide over a third of the $3.5 billion in sales expected this year. Traditional sectors like plastics and industrial chemicals, though still bigger in total, are declining in relative importance.

Popoff is fanatical about upgrading product mix. The company has dropped low-margin staples like fibers and polyvinyl chloride. Says he: "Your product has to have enough points of difference so you can price it on value to the customer rather than simply on production cost. We are trying to get into games that only a few can play." Products that Dow sees a future for include Dursban insecticide, Lontrel herbicide, the rifampicin family of antibiotics, and Dowlex, a material for making high-strength plastic film that marketing boss Thomas Sparta says "is to ordinary film as vanilla-fudge ice cream is to plain vanilla."

"All the things we make"

To sell its products, Dow Europe has 1,200 salesmen spotted in some 60 sales offices over its marketing area, which includes the Mideast and Africa. Sales in these two areas are growing 15% a year, like Europe in the golden Sixties. They now account for 10% of Dow Europe's business, and planning boss Richard Bechtold thinks they could account for 20% of a much bigger total in five years. When Henk Kila, the 43-year-old Dutchman who handles the African side, contemplates the prospects, his eyes light up. "That part of the world," he says, "needs antibiotics, insecticides and herbicides, low-cost housing materials, packaging materials—all the things we make."

One of the reasons for Dow Europe's success has been its ability to attract and keep able Europeans like Kila and weld a diverse mix of nationalities (32 at headquarters alone) into a corporate identity. Only 43 out of 13,000 employees are Americans. The 43 include the four top managers, and they remain thoroughly American in style, but that is obviously less important to the Europeans than the chance to have a lot of responsibility early in their careers and to move up fast. At the vice-presidential level, four-fifths of the executives are non-American.

The sense of autonomy extends right to

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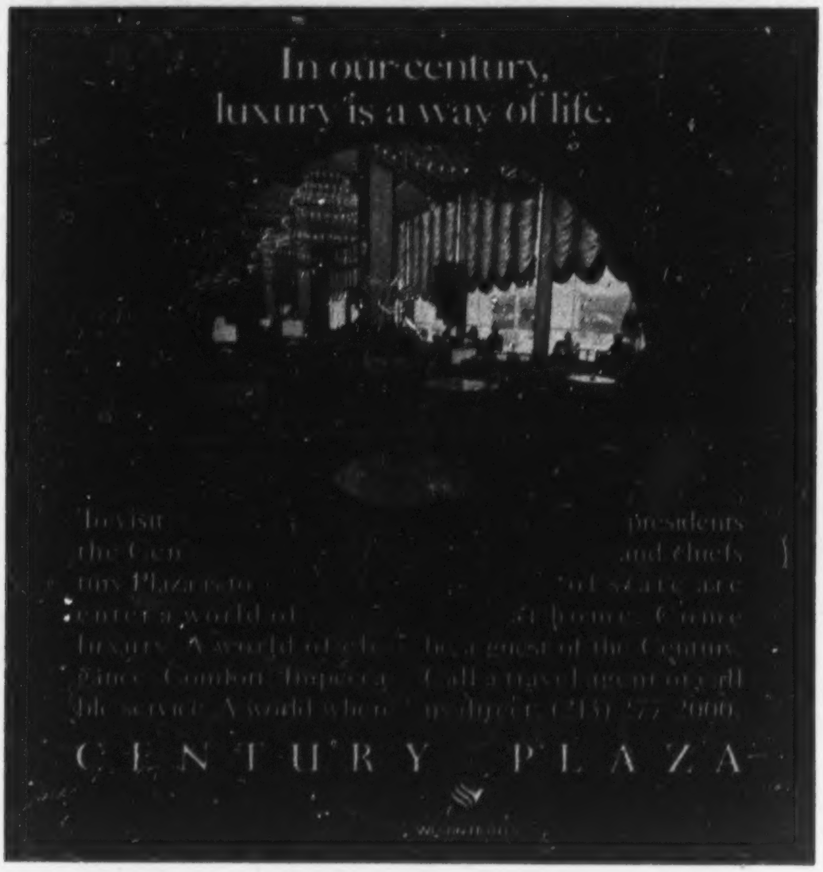

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Science. The Great Adventure

Ilse Mayer—Woodfin Camp

Frank P. Popoff, president of Dow Chemical Europe, outside his headquarters at Horgen, Switzerland, near Zurich

the top. Popoff spends a week out of every month at corporate headquarters in Midland, but not to get his marching orders. As he puts it, "If Dow Europe is to keep the autonomy it has, I have to make sure it has the resources it needs and that people know what's going on."

Popoff believes the worst is over in Europe. In his view, much of the three million or so tons of ethylene capacity now closed down will never be reopened, so capacity and demand will be much more closely matched when the recession ends. Over the long haul, he foresees growth of 3% to 4% a year for European chemical markets, nothing like the surge of the Fifties and Sixties, but enough to sustain healthy companies able to switch to more sophisticated products. Some companies, including some big ones, won't make it. In a well-publicized speech a year ago, Popoff predicted that of the world's present top 30 chemical companies, only 20 at most will survive "as we know them now" to the year 2000.

Dow intends to be part of that select company, with Europe a key element of strength. Looking beyond 1982, Dow Europe expects both sales and profits to grow by 10% a year. Back in Midland, Paul Oreffice sounds confident. "We're starting to see signs of improvement in Europe right now," he says, "and we will continue to invest and expand there. You get these bad short-term phases, but we're not in business for the short term. In the long run, Europe is a very good place for Dow to be." ▣

PROFESSIONS

Profit Pressures on

by PETER W. BERNSTEIN

Not long ago, Joseph Flom and Martin Lipton were regarded as mavericks. The law firms they headed—Skadden Arps Slate Meagher & Flom and Wachtell Lipton Rosen & Katz, respectively—were considered upstarts, and the business they specialized in, corporate takeovers, was anything but respectable. Though competitors, they stuck together—and they still do, often breakfasting at New York's posh Regency Hotel to talk shop.

But with the recent proliferation of megamergers and the megafees that go with them, Flom, 56, and Lipton, 50, have become rich, famous, and respected. Each pockets at least $1 million a year. Their firms have become the most prosperous in the country, and takeover work has become the most sought-after business in the profession. Prestigious old firms that once would not have deigned to compare themselves with Skadden Arps and Wachtell Lipton are now copying them.

Thinking strategically

Law firms are hustling new business with the aggressiveness of—a Skadden Arps. Once jacks-of-all-trades, they are now specializing. More than half a dozen firms have formed groups to handle takeovers. Legal backwaters like bankruptcy work and real estate have suddenly come into the mainstream. Firms are cultivating industries apt to want more lawyering, such as banking, international finance, and high technology. To establish themselves in these fields quickly, law firms are hiring partners from rival outfits, a practice shunned in the past, and the firms themselves are merging. Amid new competition the management practices of yesteryear are yielding, and law firms have become a fertile field for management consultants with their businesslike approaches. Says James F. Rabenhorst, a Price Waterhouse partner who heads the accounting firm's law-consulting practice: "We see law firms thinking strategically now."

The impetus for change can be traced

Research associate: Philip Mattera

Prestigious old practices are scrambling into specialties they once scorned.

the Big Law Firms

Allen MacWeeney

largely to a single source: the rise of in-house counsel. Once mainly liaison between management and outside law firms, in-house lawyers are becoming powers in their own right as companies bolster their legal staffs in hopes of controlling astronomical legal bills. As a percentage of all lawyers in the country, lawyers working for corporations doubled between 1970 and 1980 to about 11%. AT&T employs 909 lawyers, some 300 more than the nation's largest law firm. General Electric's legal staff now numbers 410.

Increasingly, these in-house law staffs handle everything from routine work to litigation, once the province of outside firms. And corporations have grown choosy about giving business to outside counsel. A firm tends to get the nod these days on the basis of knowledge about a matter, not because of traditional ties. Moreover, most corporations use several firms. Says Peter A. Bator, 52, a partner at Davis Polk & Wardwell in New York: "I think we did almost all of Morgan Stanley's legal work in 1955. Today each of the investment banks uses at least half a dozen different firms."

These in-house lawyers are keeping their outside brethren on a tighter rein. Last year Control Data issued a tough new policy statement to its outside lawyers, saying that it will not normally pay for computerized legal research, staff overtime, word processing, special publications, and attendance at continuing-legal-education seminars—all items that might have been included in past bills. Out-of-town travel must be approved in advance by a Control Data attorney, as must the hiring of associate counsel, consultants, or expert witnesses. Copies of the work done

Takeover lawyers Joseph Flom (left) and Martin Lipton, the top practitioners of the country's hottest legal specialty, chat over breakfast at the Regency Hotel in Manhattan. While both have built law firms whose partners make an average of some $350,000 a year, Flom has sought maximum growth, while Lipton's firm is deliberately small with only 67 lawyers.

for the company—memoranda of law, correspondence, even drafts—must be forwarded to Control Data. Controls at Household Finance are just as stiff. Says Robert E. Bouma, the general counsel of Household International, the parent company: "Outside counsel doesn't do anything without our permission."

As in-house counsel have been flexing their muscles, the law firms' operating costs have zoomed. Computers and word-processing equipment, while making lawyers more productive, have inflicted heavy costs. Even more burdensome are the salaries being dished out to newly minted lawyers. Last year, lawyers at the big New York firms were starting at $43,000, up from $15,000 in 1968, or half again as fast as inflation. Salaries elsewhere lag somewhat, but not by much. The big Houston firms are now paying $35,000 for openers. This year the starting salary at the top New York law firms is expected to jump close to $50,000. At Wachtell Lipton, the starting wage including bonus is $55,000.

Law is still a pretty cushy line of work, at least at the top. According to a confidential and widely respected annual study by Price Waterhouse, lawyers at a dozen of New York City's largest and most prestigious firms generated an average of $184,000 each in gross fees in 1980. The firms' grosses jumped 66% over the preceding five years, and net income per partner was up by 49%. That gave partners at those New York firms a 1980 median income of $242,685—about a third more than the median of $178,700 turned up in another Price Waterhouse study of the largest firms nationwide.

A Turnaround Team on Wall Street

The last few years have been rough for prestigious White & Case. Slow to adapt to corporations' growing tendency to do legal work in-house, it has lost 14 lawyers since 1977. Now the firm is attempting a comeback under James B. Hurlock, 48 (center), John J. McNally, 54 (left), and Rayner M. Hamilton, 46. They plan to focus on banking, international finance, antitrust, and product liability.

Alen MacWeeney

But margins in the legal business are under severe pressure. According to the Price Waterhouse study, the gross fees at those 12 New York firms, adjusted for inflation, grew by only 12% over the five years ending in 1980. Meanwhile, operating expenses were climbing at almost three times that rate. A decade ago partners expected that more than half of gross revenues would end up in their pockets; now they end up with barely 36%. After discounting for inflation, net income per partner in the last five years increased by a negligible 0.7%. "There's no question that some firms have diminishing profitability," says Marty Lipton.

Profits plane at Cravath Swaine

For some firms the bad news about margins has been made worse by a recent falloff in litigation work. After years of playing second fiddle to the corporate department, litigation came to dominate many firms during the 1970s. A few years ago, when the government's antitrust trial against IBM was going full steam, IBM's trial counsel, Cravath Swaine & Moore, derived more than half its revenues from litigation. Even before that case was dismissed in January, lawyers sensed that litigation was slowing. Cravath, a New York firm, now figures that litigation will account for 45% of its fees and that profits for the next year or two will be flat. The litigation business itself may also be changing as firms specialize in different kinds of trial work. Says Davis Polk's Peter Bator: "The generalist litigators are going out of style. It is becoming a boutique business."

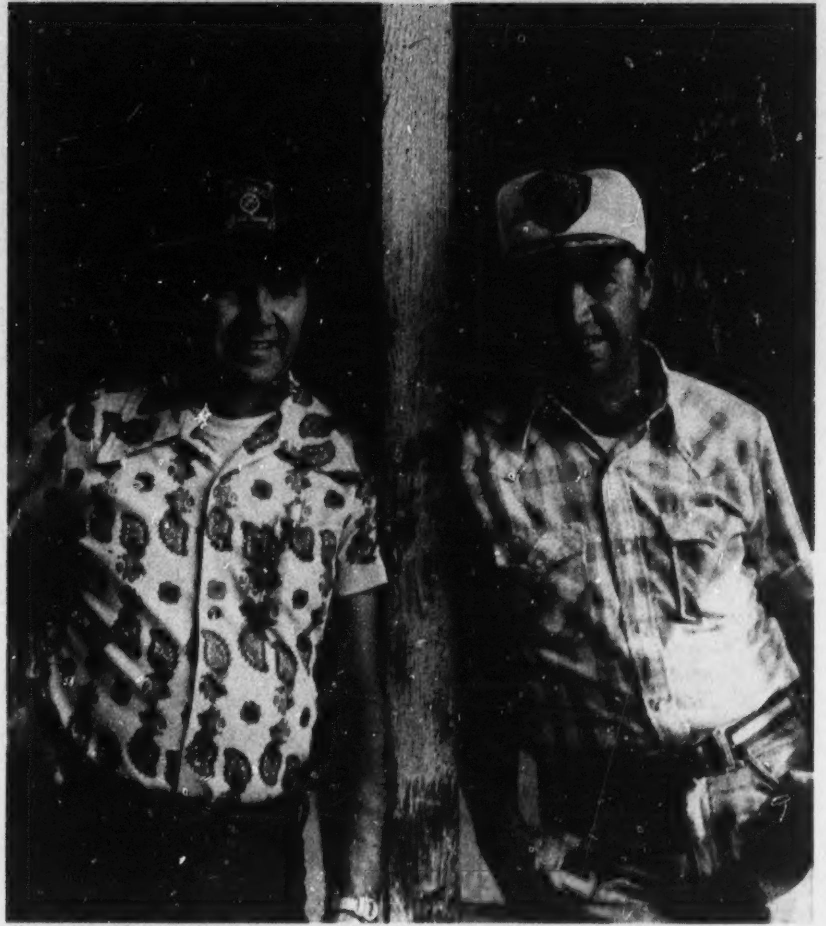
Such swings in the marketplace have jolted some of the most prestigious firms used to doing business the old-fashioned

continued

THE 25 BIGGEST LAW FIRMS

Rank	Firm (number of lawyers)	City	Representative major clients	Reputation
1	**Baker & McKenzie (605)**	Chicago	Dow Chemical, Dresser Industries, Eli Lilly, Levi Strauss, Wm. Wrigley Jr.	A loose confederation of lawyers. More lawyers abroad than in the U.S. Been the biggest for a long time. Mediocre.
2	**Morgan Lewis & Bockius (353)**	Philadelphia	Consolidated Natural Gas, Penn Central, Philadelphia Electric, Philadelphia National Bank, UGI Corp.	They'd rather not be in Philadelphia—opening lots of branches and losing sleepy, old-line image. Not in the same league as the top New York firms.
3	**Shearman & Sterling (340)**	New York	Abu Dhabi National Oil Co., Citicorp, Merrill Lynch, Midland Bank, United Technologies	Very strong firm. Dominated by Citicorp and foreign-bank work. Suffers from size and excessive bureaucracy. Stuffy.
4	**Sidley & Austin (321)**	Chicago	AT&T, Burlington Northern, Commonwealth Edison, Field Enterprises, First Chicago	Uneven, especially in handling big deals. Gentlemanly. AT&T's lead counsel.
5	**Vinson & Elkins (313)**	Houston	First City Bancorp. of Texas, Quintana Group, Shell Oil, Texas Eastern Corp., Travelers	Gets a lot of mileage from John Connally. Caters to small companies; more than 8,000 active clients. Strong in oil and gas.
6	**Jones Day Reavis & Pogue (305)**	Cleveland	Diamond Shamrock, Firestone Tire & Rubber, GM, Republic Steel, Westinghouse	Top quality; the best firm in Cleveland. Especially good in antitrust.
7	**Fulbright & Jaworski (290)**	Houston	Aetna Life, Anderson Clayton, Coastal Corp., Exxon, Southwest Bancshares	A notch down from Vinson & Elkins in Houston. Strong in energy and litigation. Made too many partners too quickly.
8	**Pillsbury Madison & Sutro (282)**	San Francisco	BankAmerica, Caterpillar Tractor, Del Monte, Standard Oil of California, Tandem Computers	Good but slipping in quality. Stuffy. Relies a lot on Standard Oil of California.
9	**Gibson Dunn & Crutcher (280)**	Los Angeles	Aetna Life, Fluor, Metromedia, Rockwell International, Times Mirror	Attorney General William French Smith's firm. Uneven work. Keen on branching, especially abroad. Not on a par with top New York firms.
10	**Squire Sanders & Dempsey (277)**	Cleveland	Cleveland Electric Illuminating, Harris Corp., NCAA, Standard Oil (Ohio), U.S. Steel	A clear second to Jones Day in Cleveland. Built practice on municipal-bond work. Good Washington office.
11	**Skadden Arps Slate Meagher & Flom (275)**	New York	Anheuser-Busch, Champion International, CSX, Daimler-Benz, Sir James Goldsmith interests	Street-smart and aggressive. Excels only in the takeover area. Joe Flom dominates the firm. Even partners work like coolies.
12	**Kirkland & Ellis (262)**	Chicago	GM, International Harvester, Skidmore Owings & Merrill, Standard Oil (Indiana), Weyerhaeuser	The Establishment firm in Chicago. Strong in litigation. Lost 15 lawyers and some big clients when ousted partner Don Reuben started a rival firm.
13	**O'Melveny & Myers (251)**	Los Angeles	Carter Hawley Hale Stores, IBM, Lockheed, Occidental Petroleum, Security Pacific	Good but not among the best. Slipped in the last ten years. Known for high fees.
14	**Davis Polk & Wardwell (242)**	New York	International Paper, McDermott, Morgan Guaranty, Morgan Stanley, Richardson-Vicks	Excellent and well rounded, with outstanding corporate department. Patrician.
15	**Paul Weiss Rifkind Wharton & Garrison (239)**	New York	Chris-Craft, Continental Grain, N.Y. Municipal Assistance Corp., Revlon, Warner Communications	One of the best. Hard-nosed litigators. Not as strong in corporate. Politically well connected.
16	**Mayer Brown & Platt (235)**	Chicago	Brunswick, Continental Illinois, Dome Petroleum, Esmark, Northern Illinois Gas	Dependent on Continental Illinois. Weak spot is litigation. Improving.
16	**Weil Gotshal & Manges (235)**	New York	General Electric Credit Corp., Matsushita Electric, Oppenheimer & Co., J.C. Penney, Sotheby Parke Bernet	Strong antitrust, bankruptcy, and real-estate practices. Not first-rate in other areas. Low morale, domineering management.
18	**Finley Kumble Wagner Heine Underberg & Casey (234)**	New York	American Bakeries, City Investing, Giant Food, Motown Records, Occidental Petroleum	Fastest-growing large firm. Not in the big leagues but trying to get there. Politically well connected.
19	**Simpson Thacher & Bartlett (231)**	New York	American Electric Power, Gulf & Western Industries, Lehman Bros. Kuhn Loeb, Manufacturers Hanover Trust, Seagram	Excellent, with particularly strong corporate department. Not aggressive in seeking new clients. High morale. Cy Vance presides.
20	**Baker & Botts (227)**	Houston	Gerald D. Hines interests, Pennzoil, Schlumberger, Tenneco, Zapata	The Houston firm with strongest corporate practice. Formal, very conservative.
21	**Baker & Hostetler (225)**	Cleveland	Avis, Cleveland Clinic, Frontier Airlines, PPG Industries, Scripps-Howard	The No. 3 firm in Cleveland. Excels in First Amendment work, lots of publishing clients.
21	**Fried Frank Harris Shriver & Jacobson (225)**	New York	Connecticut General Life, Goldman Sachs, Humana, Rio Tinto-Zinc, Royal Trust	A hot firm. Good in securities work and takeovers. As strong in Washington as in New York. Strong Democratic party connections.
21	**Milbank Tweed Hadley & McCloy (225)**	New York	Alcan Aluminium, Amerada Hess, Chase Manhattan, Columbia Pictures Industries, Mobil	Strong in banking. Stilted and lacking in imagination. May be slipping. Leader in use of computer technology. The Rockefeller family's firm.
24	**Coudert Brothers (222)**	New York	Bendix, Ford Motor, Nippon Electric, Sumitomo Bank, Thiokol	Not top-rate. Recently warded off a partners' revolt, but problems remain. Strong international practice. Has grown erratically.
25	**Covington & Burling (221)**	Washington	Du Pont, Exxon, IBM, Union Pacific, Upjohn	The leader in Washington. Versatile and talented lawyers. Patrician.

This list ranks the 25 biggest law firms on the basis of how many lawyers they employ rather than the revenues they take in, because the firms, as private partnerships, do not publish financial data. FORTUNE estimates that these 25 firms each gross between $35 million and $90 million a year, and that their profitability, which is affected by the ratio of partners to associates, varies equally widely. (Generally, the more associates per partner, the more profitable the firm.) The firms also do not usually disclose their clients, but at FORTUNE's request most named five representative major clients. The sketches of the firms' reputations are based on interviews with more than 60 lawyers. The comments reflect the consensus; the words used are the lawyers' own. Though the sample was nationwide, the views suggest a New York bias–perhaps because historically New York has tended to set standards in the law business.



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way. Wall Street lawyers often single out Sullivan & Cromwell as a firm that has been late in reacting to change. "They didn't realize they had almost lost Goldman Sachs, First Boston, and Lazard Frères as clients," says a competitor. Sullivan & Cromwell's George C. Kern Jr. virtually concedes the point: "We went into the takeover business because we were concerned that the bankers would take their business elsewhere."

White & Case, which employs 7% fewer lawyers than in 1977, is having an even rougher time adjusting. "It's the No. 1 example of a firm whose client base was skewed to old-line manufacturing companies that now do most of their work inside," says a competitor explaining the firm's decline. The most visible and sudden jolt came when Seagram, a longtime client, took its business down the street to Simpson Thacher & Bartlett. When the *American Lawyer*, a trade magazine, ranked 169 firms in terms of growth last year, White & Case placed last.

New firms are also vulnerable. Kutak Rock & Huie, an Omaha firm specializing in tax-exempt finance, which had grown spectacularly during its 16-year life, fired 30 lawyers last fall. Says Robert J. Kutak, 49: "We decided to resize ourselves." There are 186 lawyers left.

Won't do wills

In this tough new environment, firms have been scrambling to get rid of unprofitable lines of business. Over the last five years, as casualty-insurance companies have clamped down on legal fees, Houston's Baker & Botts has been representing fewer of them in damage suits. "That business was no longer profitable," says managing partner William C. Harvin, 62.

For some firms the pruning effort has been an education. "The truth is we don't know what is profitable," confessed one partner at a Wall Street firm that has invested heavily in office-management systems. "We're working on that."

Trusts and estates work, traditionally a standard service of corporate-law firms, is coming under new scrutiny. Drafting wills

continued

Joe Flom's Marvelous Money Machine

For most of the past decade the reddest, hottest red-hot law firm in the U.S. has been Skadden Arps Slate Meagher & Flom, which hitched its wagon to a star named Joseph H. Flom and rode to fame and fortune. Skadden Arps now ranks 11th in terms of number of lawyers employed and is one of the fastest-growing law firms in the country. FORTUNE estimates that the firm grossed about $65 million last year and that its 74 partners probably pulled down an average of close to $350,000 apiece.

Founded in 1948, the firm took off after a long, slow start. "The first two years I was on salary, I made more than all the partners combined," recalls Flom, who was hired as the firm's first associate right out of law school. By 1970 the firm still employed only 40 lawyers, but Flom had a growing reputation as an aggressive proxy-fight lawyer. When a number of corporations started making hostile tender offers for other companies in the early 1970s, they came to Flom for advice. As the number of deals exploded, so did Skadden Arps. Lawyers at the firm figure they are involved in 80% of the big deals made today.

Such dominance is a testament both to Flom's keen legal mind and his tactical skills. Brooklyn-bred and educated at New York's City College and Harvard Law School, he is an unprepossessing man with a genius for crafty arguments. He once argued that a dental-supply company whose customers included many Jewish dentists would lose business if a company partly owned by some Kuwaiti investors took it over. Whether it was that argument, and its implication that the fighting could get nasty, or Flom's success in recruiting a white knight to make a competing offer, the company backed off. While often taciturn and ill at ease personally, he shines when plotting strategy with clients.

A Bloomingdale's of law

Flom is a peculiar leader. Though he says, "I want to build an institution," he eschews managing the firm, even skipping out on partnership meetings. Yet his absence doesn't signify indifference; nothing is done without his consent.

Flom's aim is to create the Bloomingdale's of the law business—a group of specialty boutiques all under one shingle. "Our strategy," explains Peter P. Mullen, 53, the firm's executive partner, "is to take the preeminence we achieved in the tender-offer business and use it to develop other areas." The firm investigated 27 different fields of law before deciding to concentrate on bankruptcy, real estate, environment, and energy in addition to the antitrust, corporate, litigation, tax, and labor practices it already has.

To establish itself in these new areas, Skadden Arps has been hiring top legal talent from all over. It signed up a New York University law professor to start its product-liability practice in 1979. A year later it recruited a specialist in bankruptcy law from Weil Gotshal & Manges. Its most dramatic move came last year when it corralled Lynn R. Coleman, 42, Deputy Secretary of Energy in the Carter Administration, to begin an energy practice. The firm has also signed up a notable nonspecialist: Irving S. Shapiro, 65, the former chairman of Du Pont, who practices out of Wilmington.

Such diversification has already produced results. Mullen claims that takeover work now accounts for about one-fifth of the firm's business, down from about 40% five years ago. But the energy practice has been a disappointment, and the non-takeover business has been bumpy. "These guys are so geared up for crises that ordinary matters get left in the dust," complains a dissatisfied customer.

And after Flom? "If Joe was hit by a truck, the firm would suffer a glitch and then pick itself up and go on," says a colleague. In fact, it's too soon to tell whether Skadden Arps will become the institution Flom wants it to be. But his own reputation is established. As one competitor puts it: "He is the greatest legal entrepreneur of the century."

Amid 203 Skadden Arps lawyers, Joe Flom sits front and center. At his right is executive partner Peter P. Mullen, 53.

Neal Slavin

These boxes in storage in Rotterdam, New York, contain some of the 7.8 billion pages of documents that a federal court ordered IBM to save during the antitrust case the government dropped in January. The recent falloff in litigation and the government's new reluctance to bring some kinds of large antitrust cases make it unlikely that so vast a collection of materials will be amassed again.

can be extremely lucrative when it paves a lawyer's way into the promised land of executor fees. But in practice it is often offered primarily as a convenience for executives of big corporate clients. Says William C. Cobb, a Houston-based consultant who has worked for quite a few of the 200 largest law firms: "For many, trusts and estates is a loss leader."

Legal life after death

But mainly the law firms are plunging headlong into lucrative new specialties. Once dismissed as "unseemly, grubby undertaker's work," in the words of a partner at Milbank Tweed Hadley & McCloy, bankruptcy work has gained a new fascination as lawyers discover that there can be life after death—for example, when a bankrupt client such as Penn Central emerges as a dynamic new corporation and client. Another long-neglected area suddenly prominent is real estate. Weil Gotshal & Manges's real-estate department, which had six lawyers in 1979, now has 32. Some of this growth is explained by the presence of a new partner brought in to stimulate the practice, but, as senior partner R. Todd Lang, 57, points out, the practice has also gained "an institutional aspect." One example: the recent $500-million deal for the General Motors Building in New York. Weil Gotshal, whose offices are in the building, represented GM, which under the complicated transaction will eventually sell the building.

Some firms' search for legal gold has a speculative aura. Sullivan & Cromwell is going after commercial banking on the theory that interstate banking will come, and with it a wave of bank mergers. A group to handle bank mergers has already been set up. Says one partner: "Banks from all over the world are coming in to see us." In contrast, White & Case is focusing on international finance. Its clients already include the central banks in Costa Rica, Gabon, Indonesia, Turkey, and Zaire. Gibson Dunn & Crutcher, a Los Angeles firm, takes a more California-oriented approach, turning its attention to the emerging companies of Silicon Valley in the belief that these fast-growing enterprises will have spent less time developing in-house legal capabilities and therefore will lean more heavily on outside counsel.

Whatever new practice areas lawyers dream up, it's doubtful that they will ever strike a bonanza as big as takeover work. Traditionally lawyers have charged clients on the basis of time, with six minutes now a standard billing unit. But merger and acquisition work commands a premium. For openers the top firms charge a serious minimum fee. At Wachtell Lipton it can be $50,000 to $100,000; for about $75,000 a year clients can retain Skadden Arps. The down payment ensures the client a crack at Skadden Arps' services should it become involved in a takeover brawl. In the case of conflict between two clients, the firm usually chooses to represent the company under attack. More than 200 companies have anted up for "the Joe Flom protection policy," as one lawyer dubs it.

Flom defends what he claims, probably correctly, is an age-old practice. If the money isn't used in a takeover matter, he notes, the client is free to apply it to other services provided by the firm. As for those who criticize his retainers: "They're just jealous because I have it and they don't."

Once a takeover fight begins, all firms charge higher-than-usual rates. According to its formal billing policy, one firm specializing in takeovers bases its charges in part on "the responsibility assumed and the result achieved." That means "not less than 200% and sometimes more than 300% of base time charges." Rough translation: $400 to $600-plus per hour per lawyer. In the Mobil-Marathon-U.S. Steel struggle, the dozen or so law firms involved—including Donovan Leisure Newton & Irvine, Jones Day Reavis & Pogue, and White & Case, lead counsel for the three companies respectively— had fees of more than $10 million.

With that kind of money available, firms are foraging ravenously for takeover work. Shearman & Sterling has 30 lawyers assigned to its tender-offer group. A fifth of Sullivan & Cromwell's revenues comes from takeover work. Fried Frank Harris Shriver & Jacobson derives a "significant" part of its fees from takeover business. The lawyers involved are fiercely competitive. Crows one in an unguarded moment: "We've had a remarkable string of successes against Skadden Arps."

Takeover work has another advantage: "It's a big new-business-getter," says George Kern, 56, the lawyer at Sullivan & Cromwell who runs its merger and acquisition department. A third of the firm's M&A work comes from new clients. Besides, Kern says, clients who come in for takeover work end up using the firm for unrelated matters.

Lateral hiring

Has the merger wave crested? "Quite the contrary," says Joe Flom. The depressed economy and the permissive regulatory climate should spur more big deals. Adds Flom: "Bargains abound."

Since it isn't easy to become an instant expert, law firms are hiring established specialists—something they frowned on in the past. Traditionally the partners of the big firms have been homegrown, with exceptions made only for an occasional former high-ranking government official or distinguished judge. Today lateral hir-

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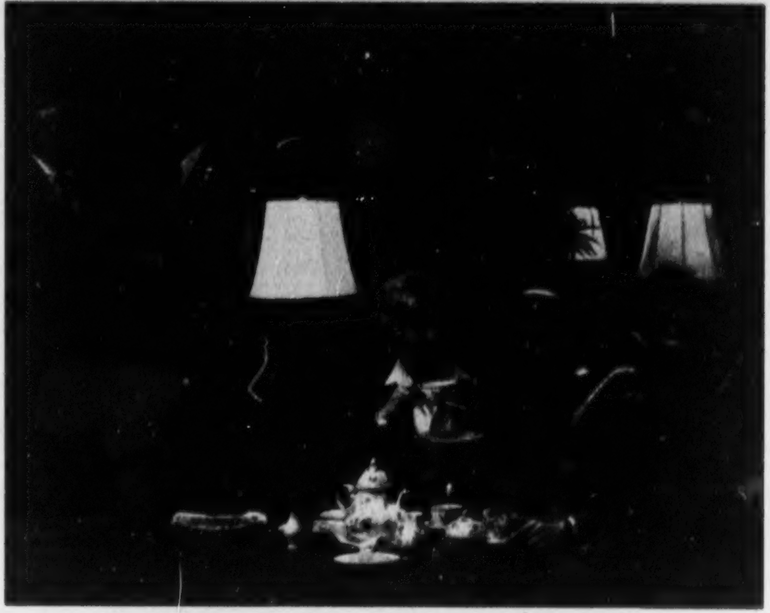

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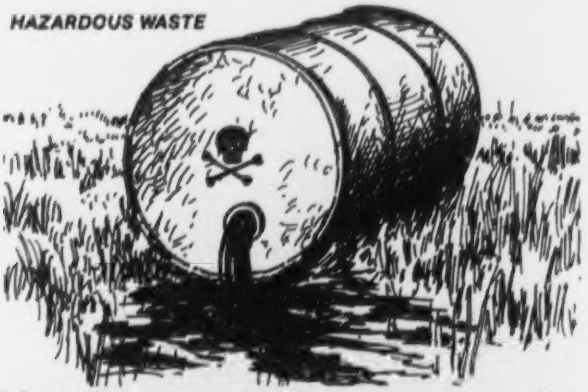

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Lawyers are bid for like baseball players.

ing, as it is known, is epidemic. Lawyers are bid for like baseball players, and command major league salaries as well.

When Jerome Alan Cohen, 51, a Harvard professor and renowned Asian legal scholar, decided to leave Coudert Brothers, he talked to at least three other firms—Skadden Arps, Cleary Gottlieb Steen & Hamilton, and Paul Weiss Rifkind Wharton & Garrison. In the end Cohen signed with Paul Weiss, which guaranteed him about $300,000 in the first year. It will be a while before Paul Weiss knows if the gamble pays off, but thanks to Cohen the firm now is doing business in Peking even though foreign lawyers are technically not allowed to practice in China.

No goodbyes to Columbus

As long as you're hiring an outside partner, why not absorb an entire firm? The bigger firm gains new expertise and clients, and the smaller firm is able to spread its overhead over a broader base while gaining new business. Exploiting that logic, Finley Kumble Wagner Heine Underberg & Casey has become the fastest-growing large firm in the country. Founded in New York in 1968 with six partners and three associates, it now has 234 attorneys in six offices throughout the U.S. Along the way it absorbed a small bankruptcy firm, a Washington, D.C., firm with a strong government-relations practice, and a few others. It has also taken on as partners political heavyweights like former New York Mayor Robert Wagner and ex-Senator Joseph Tydings of Maryland.

Law firms are also striking out geographically. In the past, firms have opened new branches mainly to give an existing client better service; for example, the only reason Simpson Thacher & Bartlett has an office in Columbus, Ohio, is to cater to the needs of client American Electric Power. Now firms are settling in new spots whether they have a client there or not. Sidley & Austin, a Chicago firm, started an office in Los Angeles because "it is one of the primary financial centers of the nation." Morgan Lewis & Bockius, the nation's second-largest firm, with seven of-

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EASTERN

Washington, D.C., may be a disaster area.

fices, says it thinks of itself not as a Philadelphia law firm, heaven forbid, but as a national law firm whose headquarters happen to be in Philadelphia.

The presence of all these new lawyers and offices subjects law firms to new strains. Branch offices have often been unsuccessful. Cravath recently decided to close its 18-year-old Paris office. "From an economic point of view, we should have closed both London and Paris years ago," says managing partner Samuel C. Butler, 52. One impending disaster area may be Washington, D.C., where almost all the big firms have opened offices. The sluggish regulatory scene has already caused one firm to close its branch. Even established Washington firms are finding business slow. "They're politely calling New York firms and offering to help out on matters," reports a partner at one Wall Street firm. It's no accident that the firms that have been most aggressive about opening branch offices are in depressed industrial cities like Philadelphia and Cleveland. Success, of course, has its own perils. Lawyers in a booming branch office are tempted to break off on their own and keep all the money for themselves.

Partnership isn't forever

As firms get bigger, the strains are sure to continue. Partnership used to be for life, but it is no longer. In a dispute over how to divide the spoils, 12 lawyers left New York's Kaye Scholer Fierman Hays & Handler three years ago to form their own firm. Dissatisfied with the performance of some of its partners, Willkie Farr & Gallagher of New York has asked about a half dozen to leave over the last few years.

Law firms can still continue to grow. But the fruits of success will not rain down upon all the firms as equally as in the past. Says Bruce D. Heintz, a law-firm consultant at the accounting firm of Arthur Young: "In the 1980s the bigger, stronger, more aggressive firms will steal from the weaker ones." That Darwinian message is a further piece of good news for Joe Flom, Marty Lipton, and all those following in their footsteps. ▣

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The Bottom Line on Ten Big Mergers

Bill Simon: Out of the News, In the Money

What's Detaining the Office of the Future

$3.00 May 3, 1982

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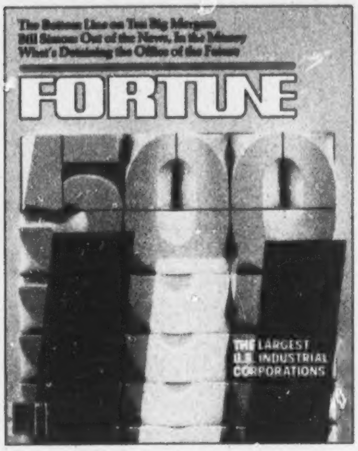

The cover painting by Steve Tarantal, seven more of whose works are in the portfolio beginning on page 110, is made up of 23 wooden forms over which canvas has been stretched and painted with acrylics. It was photographed by Seymour Mednick. Various features relating to the FORTUNE 500 are highlighted at right in red.

ACKNOWLEDGMENTS

4—Terry Hourigan. 37—Hiroko. 73,74—Chartmakers Inc. 77,78,80—Michael McGinn. 86—Top left, Alen MacWeeney; right, Will McIntyre; bottom, courtesy *The Commercial Appeal*. 87—Ben Weaver-Camera 5. 91,96—Eliot Bergman. 100,101—Gem photograph, Carl Flatow; Tupperware photograph, Carl Zapp. 102—Chart, Joe Argenziano; photograph, Al Freni. 106—Top, gem photograph, Carl Flatow; sucker rods, Mark Godfrey-Archive; bottom, gem photograph, Carl Flatow; quartz crucibles courtesy General Electric. 129—Courtesy Denver Broncos Football Club. 130—Girard photograph, courtesy Kaiser Steel. 160—Chart, Joe Argenziano; photograph, Al Freni. 178—Machines courtesy Xerox, Rolm, AT&T, Wang, IBM. 182—Joe Argenziano. 184,189—William Reduto. 240—Jeff Jacobson-Archive. 259—Patricia Byrne. 290,292,294,296—Patricia Byrne.

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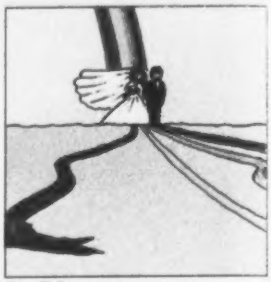

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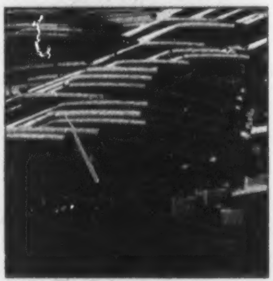

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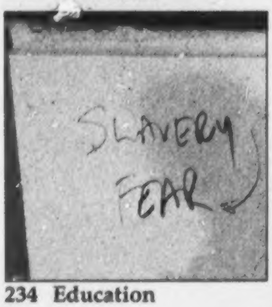

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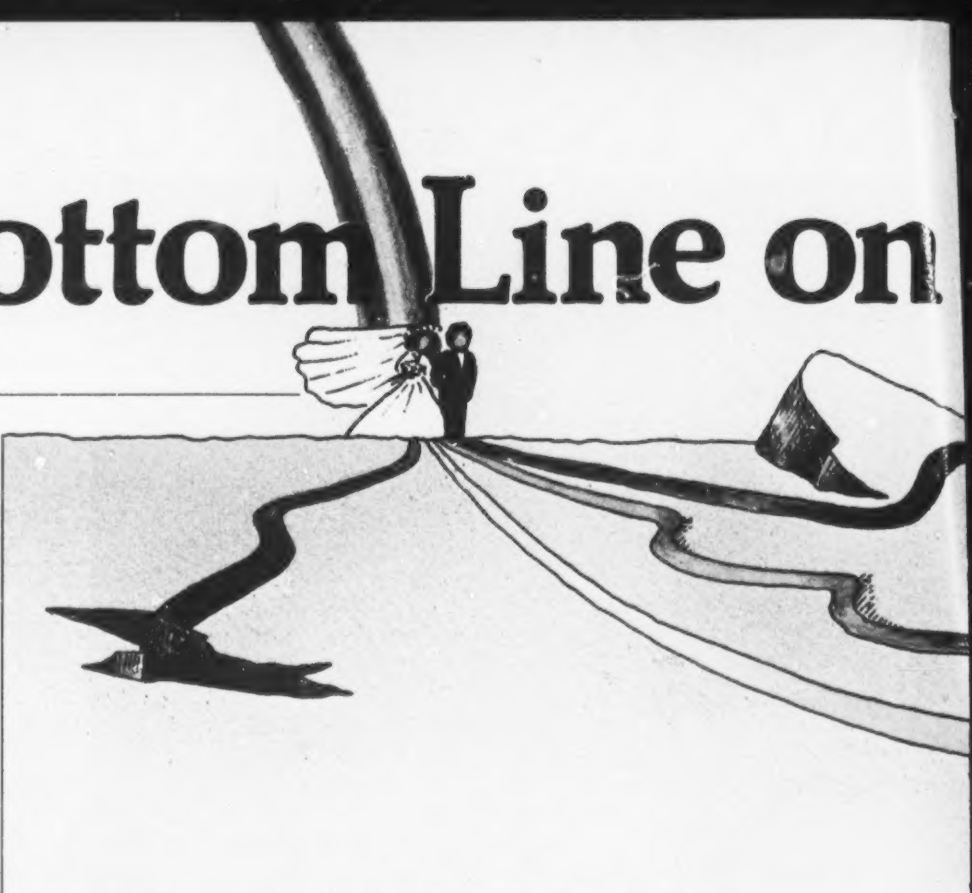
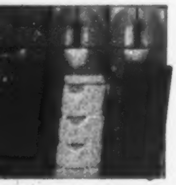




by ARTHUR M. LOUIS

Do conglomerate mergers make sense? That oft-debated question has taken on new urgency, what with the profusion of huge and often hasty corporate intermarriages—between steel and oil companies, construction and mining companies, electronics and chemical companies. The executives who concoct these mergers typically claim that diversification reduces risk and brings greater stability. But many critics insist that conglomerate mergers *increase* risk by plunging the acquirer and its management into industries—and problems—about which they know little or nothing, often through deals made at exorbitant prices. The critics also contend that these mergers represent a socially unproductive use of capital, and suggest that the executives may simply be indulging their egos, jeopardizing the shareholders' money to inflate their own importance in the business world. As an irate stockholder once complained to the acquisitive Robert W. Sarnoff, then the chairman of RCA: "Tell me, mister, where is it going to end? You are going to build an empire, and look what happened to all the empires!"

The debate seems unending, but the outlines of a conclusion might emerge from studying old mergers and seeing how well they worked out. This article is intended as a step in that direction.

FORTUNE scrutinized the ten biggest conglomerate acquisitions made during 1971 by companies on that year's list of the 500 largest industrial corporations (see page 260 for the latest list). We defined "conglomerate acquisition" as any corporate marriage that gave the acquiring company a significant stake in a new line of business. None of the acquisitions in our study was exceptionally large by today's standards. This can be attributed partly to the inflation since 1971, but mainly to the fact that relatively few companies were willing to take a big plunge so soon after

Research associate: Ford S. Worthy

THE TEN BIGGEST CONGLOMERATE ACQUISITIONS MADE BY 1971's "500"

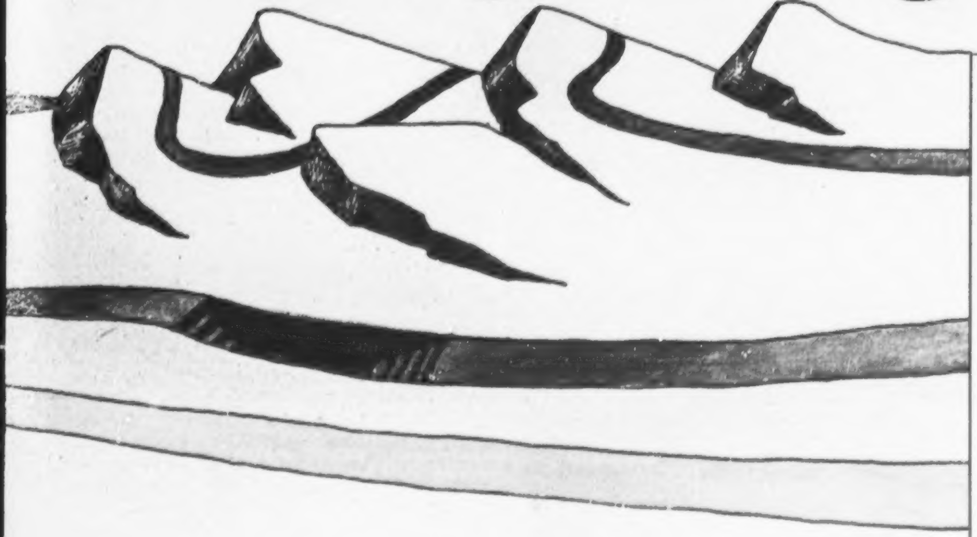
Acquiring company Acquired company	Price	% of book value	Industry	Acquirer's 1981 profits Acquisition's share (est.)
Schering[1] **Plough**	$644 million in common and preferred stock	815%	Drugs Cosmetics, toiletries	$179 million $ 44 million
Heublein **Kentucky Fried Chicken**	$237 million in common stock	427%	Alcoholic beverages Fast-food outlets	$ 88 million $ 22 million
Squibb **Lanvin-Charles of the Ritz**	$206 million in common stock	426%	Drugs Cosmetics, fragrances	$105 million $ 15 million
RCA **Coronet Industries**	$187 million in common stock	515%	Electronics Carpets	$ 54 million $ 5 million
Northwest Industries **Buckingham**	$120 million in cash and notes	736%	Conglomerate Alcoholic beverages	$419 million $ 4 million
ITT **O.M. Scott & Sons**	$108 million in common stock	420%	Conglomerate Lawn-care products	$677 million $ 13 million
American Cyanamid **Shulton**	$106 million in common stock	169%	Chemicals, drugs Toiletries, cosmetics	$197 million $ 14 million
General Host **Cudahy**	$80 million in cash	141%	Food, retail stores Meatpacking	$ 14 million Not meaningful
Nabisco[2] **J.B. Williams**	$72 million in common stock	Not available	Food Toiletries	$266 million $ 2 million
Johns-Manville[3] **Holophane**	$62 million in common stock	324%	Building products Lighting fixtures	$ 60 million $ 8 million

[1] Now called Schering-Plough. [2] Now called Nabisco Brands. [3] Now called Manville.

Claire Schumacher

FORTUNE
May 3, 1982

Ten Big Mergers



1981 earnings per share of acquirer		What the acquirer said about the acquisition	
Actual	**Hypothetical** (if acquisition hadn't been made)	**Then**	**Recently**
$3.31	$4.08	The two companies complement each other well; Schering's research and international operations will benefit Plough.	Schering's international people didn't adapt well to consumer products. That synergism took longer than we thought.
$4.09	$4.11	Gives us a strong position in fast foods; provides immediate new dimensions and promising prospects.	We learned the hard way; we made our share of mistakes; we took too long to move down the learning curve.
$2.10	$2.01	The proxy statement can't spell out the growth opportunities that we believe lie ahead of Lanvin-Charles of the Ritz.	We made some mistakes because we didn't understand the business. But our direction was correct.
($.19)	($.28)	Should provide valuable diversification in an important consumer growth area.	We will consider the sale of Coronet when market conditions warrant.
$14.20	Not calculable	Buckingham is a fine company with a strong earnings record.	Of importance in 1981 was the unsolicited cash sale of our beverages segment; sale was a proper strategic move.
$4.58	$4.54	[ITT, perhaps because it was under antitrust attack in 1971, did not even issue a press release when Scott was acquired.]	O.M. Scott is a leader in lawn care and gardening; its strength is evident in its higher revenues.
$4.11	$4.08	Brought us a fine name with an excellent product line.	We'd be a much more cyclical company if we didn't have Shulton. Synergy in research took too long to come.
$2.95	Not calculable	Represents a significant step toward our goal of acquiring businesses with proven earnings.	The divestiture of Cudahy's meat business will minimize our vulnerability to this cyclical, commodity-driven business.
$4.21	$4.36	Represents planned expansion into consumer goods.	[Nabisco would not talk to FORTUNE about J.B. Williams; several Wall Street analysts say Williams may soon be put up for sale.]
$1.53	$1.27	Establishes Johns-Manville as a prominent entity in the field of lighting fixtures and components.	During much of the past decade Holophane has distinguished itself as a contributor to our sales and earnings.

the stock-market collapse of 1970. In the largest deal by far, Schering Corp., a manufacturer of prescription drugs, used $644 million of stock to merge with Plough Inc., which made nonprescription drugs, cosmetics, and toiletries. (Technically, neither company acquired the other; in its study, FORTUNE put Schering, the larger of the two, in the role of acquirer.)

Since the crucial test of any merger is its impact on the bottom line, we tried to measure how the mergers affected the earnings per common share of the acquiring companies. We calculated what the 1981 earnings per share of the acquirers might have been if the mergers had not taken place, and then compared these figures with the actual results.

In the eight cases where companies were acquired with stock, we figured the hypothetical earnings per share this way: From the average number of common shares that the acquirer had outstanding in 1981 we deducted the number that it issued in 1971 for the acquisition. That step stripped the acquisition from the acquirer's 1981 capitalization. We then stripped the acquired company from profits by deducting its estimated 1981 earnings from the acquirer's total earnings applicable to common stock. Finally, we divided the remaining earnings by the remaining shares to produce the hypothetical result. It shows what would have happened if the acquisition hadn't been made, while actual earnings, of course, show what did happen.

continued

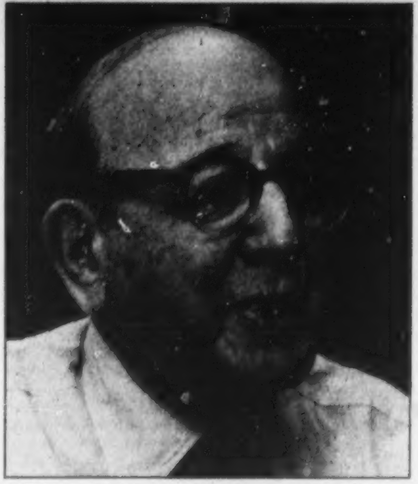
An acquisition that improved the acquirer's 1981 per-share earnings is indicated by a line under the actual per-share figure, an acquisition that didn't by a line under the hypothetical figure. The lines show a standoff—a five-five split. The Buckingham and Cudahy deals were clearly unrewarding, though hypothetical results weren't calculable. (Cudahy's 1981 earnings were "not meaningful" because General Host wrote meatpacking off in 1980.) RCA shows a profit of $54 million against a per-share loss because preferred dividends ate up the profit. Coronet, though no big earner in 1981, helped its parent's per-share results because the rest of RCA did so badly.

Richard A. Salomon, 70, ran Lanvin-Charles of the Ritz for 35 years, but sold it to Squibb when his sons declined to succeed him.

George L. Schultz, 64, considered selling Shulton to SmithKline but got stuck with Cyanamid instead. At least his citrus grove spurts profits.

The Sellers Took to the Sidelines

Of the ten acquired companies in FORTUNE's merger study, six were still being run by entrepreneurs or heirs at the time the deals were transacted in 1971. One of the proprietors, Matthew B. Rosenhaus, chief executive of the toiletries company J.B. Williams, died in 1980 at age 68. He served to the end as vice chairman of the acquiring company, Nabisco, and as head of the Williams subsidiary. The other five proprietors are still living, and all look back on the mergers with at least some disillusionment.



Abe Plough, 90, who once peddled "antiseptic healing oil," might wish some now to bathe his merger wounds.

Abe Plough was the man behind Plough Inc., which merged with Schering Corp. Starting as a teenaged entrepreneur, Plough built his company into a major manufacturer of toiletries, cosmetics, and nonprescription drugs through many small acquisitions—"chips and whetstones" he called them. By the time of the merger, Plough Inc. was grossing around $170 million annually. After the merger, Abe Plough was appointed chairman of the newly formed company, in which he held shares then worth nearly $50 million. But the job was strictly honorary; the chief executive was a Schering man. The new management gradually sold some of Plough Inc.'s less profitable chips and whetstones, which probably distressed Abe Plough. He resigned from the Schering-Plough board in 1976 and hasn't set foot in any company facility since. Still vigorous at 90, he now spends six days a week raising money for his favorite charities.

John Y. Brown Jr., whose Kentucky Fried Chicken Corp. was faltering when he sold it to Heublein, found that he wasn't thereafter too welcome at headquarters. Retained as chairman of Kentucky Fried, though not as boss, he had little to do, and his advice was rarely heeded. He soon liquidated the half million Heublein shares he received in the merger (worth around $20 million at that time), and he left the company in 1973. By that time, he remembers unhappily, KFC was overrun with managers "who had textbooks under their arms on how to run a business." Brown later invested in another fast-food chain, Lum's Inc., bailing out when it started to sink, and started a new chain called Ollie's Trolley, which collapsed. He also invested in professional basketball teams—the Kentucky Colonels, Buffalo Braves, and Boston Celtics. Along the way he married sportscaster Phyllis George, a former Miss America. A Democrat from a politically prominent family, Brown was elected governor of Kentucky in 1979.

The founder of Coronet Industries, Martin "Bud" Seretean, stayed active in management after RCA bought his company. He continued as chief executive of Coronet, a carpet maker, and his 1.5 million RCA shares, then worth nearly $50 million, won him a seat on the board. Seretean became a bitter opponent of Chairman Robert W. Sarnoff, whom he publicly accused of mismanagement. Sarnoff forced Seretean off the board in 1973, and Seretean resigned as chief executive of Coronet, though he remained chairman. (Sarnoff himself was forced to resign two years later.) Now 57, Seretean is helping RCA find a buyer for Coronet.

Two of the erstwhile proprietors, George L. Schultz and Richard A. Salomon, are still directors of the acquiring companies. Schultz, whose father founded Shulton Inc.—best known for its Old Spice line of toiletries—stayed on as president of the subsidiary for more than a year after it merged with American Cyanamid, then dropped all operating

OVERNOR
BROWN
Kentucky

John Y. Brown Jr., 48, made some dubious investments after selling Kentucky Fried. He prefers municipal bonds now that he's a governor.

duties. Today, at 64, he shuttles between a home in New Jersey and another in Florida, where he owns an 840-acre citrus grove. He and his family have sold about two-fifths of the 989,000 Cyanamid shares they received in the merger—"to diversify," he explains. The remaining shares declined in value over the decade, and were recently worth about $15 million. "It's no secret," says Schultz, "that the former Shulton stockholders have been disappointed that the Cyanamid stock hasn't done anything."

Salomon, whose uncle founded the Charles half of Lanvin-Charles of the Ritz, gave up his operating duties after it was bought by Squibb Corp. As a Squibb director he complained in vain when his successor made mistakes that sent Lanvin's profits plummeting. "I was heartsick," he recalls. "Here I had given them a company that I knew was in excellent health, and it was behaving like paste." Salomon and his family had received 1.3 million shares of Squibb stock (adjusted for a split) in the merger, but they sold half within a year and a bit more in later years. They currently hold 570,000 shares with a recent market value of nearly $20 million. Now 70, Salomon is a noted philanthropist, having made seven-figure gifts to such institutions as Brown University, where he chairs the board of trustees, and the New York Public Library, which he served as chairman for four years.

No comparable test could be made in the two cases where companies were bought with cash—Northwest Industries' acquisition of Buckingham, the importer of Cutty Sark Scotch, and General Host's acquisition of Cudahy, primarily a meatpacker. In theory, a logical approach would have been to assume that the acquirers had used the cash instead to buy back their own stock in 1971—as many shares as they could at the price then prevailing. This procedure would show whether the acquirer could have done better by betting on itself rather than on an acquisition. The hypothetical earnings per share for 1981 would be calculated by deducting the number of repurchased shares from the acquiring company's current capitalization and by also deducting the acquired company's 1981 earnings.

But the cash deals in our study presented special complications that made such a comparison meaningless. In the case of General Host-Cudahy, the amount of cash used—$80 million—would have been enough to buy back *all* of General Host's outstanding shares at their 1971 high price, with some $30 million left over.

In the Northwest-Buckingham deal, Northwest had to borrow the $120 million it used to buy Buckingham, obtaining the money largely because the acquisition made good collateral. But Northwest almost certainly couldn't have borrowed that much money in 1971 to buy its own shares. At the stock's high for the year, the $120 million would have consumed nearly half the company's capitalization, and any potential lender would no doubt have considered such a shrinkage preposterous.

Nevertheless, both General Host and Northwest would have been much better off if they had bought feasible quantities of their own stocks rather than making the acquisitions. The stocks of both were selling reasonably in relation to book value. The price paid for Cudahy seemed reasonable also—41% over book value—but Buckingham sold high, at more than seven times book. Neither company, in any case, went on to produce strong profits. By 1981 Cudahy's meatpacking operation had become a chronic money loser, while Buckingham's profits, hit by declining demand for its main product, Scotch whisky, had dwindled to less than half their 1970 level. Northwest's other businesses, meanwhile—the crowd it would have been betting on had it bought in its own stock—did well, experiencing vigorous growth in profits during the 1971-81 decade. At decade's end, the company's president, Ben Heineman, was so enthusiastic about Northwest's business that he was actually doing what we would theoretically have proposed in 1971: buying in large quantities of his own stock.

In 1980 General Host took a $28.5-million pretax write-off on Cudahy and it has since sold most of Cudahy's assets. Early this year Northwest sold its beverage division, including Buckingham, to Beatrice Foods. Two other acquired companies in our study may soon be divorced. Coronet Industries, a carpet manufacturer bought by RCA, is on the block, and Wall Street analysts say that Nabisco Brands is considering the sale of J.B. Williams, a maker of toiletries.

A snapshot instead of a reel

The method we used to analyze the eight acquisitions made with stock has some shortcomings. One is that we had to estimate 1981 earnings of the acquired companies. None of the acquiring companies publish—nor would they divulge to FORTUNE—the net incomes of their acquisitions. But annual reports provide a lot of revealing information about "segment" profits these days, and we also discussed our profit estimates with security analysts. We consider the estimates reasonable.

Another shortcoming is that our study takes a snapshot of just one year—1981. The earnings of a given acquisition could have been better in previous years, or worse. Using a one-year snapshot, furthermore, means that any capital flowing in and out of the acquisition over the years is ignored. An acquired company that has drawn on its parent for capital has leeched the parent's other businesses; a situation like that would make the 1981 "hypothetical case"—with the acquired company deleted—look weaker than it is, since the businesses producing the hypothetical earnings would have been deprived of capital and earnings that they would have had if the acquisition had not been made. On the other hand, the hypothetical case would look stronger than it is if capital had been taken from the acquisition and allocated to the parent's other operations.

The statistical shortcomings in our exercise do not destroy its basic point. In 1971 our ten acquirers had the option of sticking with their existing businesses or of using their stock as currency to make an acquisition that would widen their range. They chose, so to speak, to enlarge their playing field. The wisdom of that decision may be judged today by how much stock they gave up and how well earnings proceeded to do, both in the acquired company and in the acquirer's other businesses.

Some appalling returns

As the table on pages 84 and 85 illustrates, the verdict, going by earnings-per-share comparisons, is mixed. Five of the acquiring companies—Squibb, RCA, ITT, American Cyanamid, and Johns-Manville—evidently would have fared worse in 1981 if they had not made the mergers. Three others—Heublein, Schering, and Nabisco—would have fared better, and to this group should be added Northwest Industries and General Host, even though the toll of their mergers could not be measured exactly. The tally, then, is five in favor of the acquisitions, five against.

The case for the acquisitions grows considerably weaker if we also look at return on investment, illuminated on the table by the relationship between the price paid for the acquisition and its estimated 1981 earnings. Most of the acquisitions produced appallingly low returns during 1981. In three cases—Nabisco-J.B. Williams, RCA-Coronet, and Northwest-Buckingham—the estimated return on investment was less than 5%. In three more cases—Squibb-Lanvin, Schering-Plough, and Heublein-Kentucky Fried Chicken—the return was between 5% and 10%. The only deals in which the return exceeded 10% were ITT-O.M. Scott, American Cyanamid-Shulton, and Johns-Manville-Holophane. And none of them matched the 13.8% median return for all the companies in this year's FORTUNE 500.

If we go beyond the statistics and consider the paths of some of these corporate marriages, the case for conglomeration looks even bleaker. For example, a particularly long and painful period of adjustment followed Heublein's marriage to Kentucky Fried Chicken, which was a high-flyer in the fast-food business during the Sixties. But it was already in a tailspin by the time Heublein, a leading distiller, decided to acquire it. Cocky with success, KFC's old management, under the leadership of John Y. Brown Jr., now the governor of Kentucky, had diversified beyond chicken into roast-beef restaurants, fish-and-chips restaurants, and motor hotels. These ventures never jelled, and KFC suffered a $2.5-million loss in the six months that ended in March 1971.

Why, then, did Heublein go ahead with the merger that July, shelling out $237 million in common stock for KFC? "Our objective," recalls Stuart D. Watson, then president and now chairman of Heublein, "was to develop a better balance between our alcoholic-beverage business and our food business, which was then small." Watson acknowledges that he received warnings from friends on the board of General Foods, which had previously bought another fast-food chain, Burger Chef. They said that fast food had little in common with shelf goods and that it required special, scarce management skills. After the merger, Heublein took a $32.5-million pretax write-off to complete the divestiture of KFC's non-chicken wings—but the trouble was only beginning.

KFC had grown so rapidly that it had failed to maintain adequate control over its 3,000 franchised outlets, which greatly outnumbered company-owned restaurants. Anarchy prevailed. The franchised operators were notoriously rude to customers, their restaurants were messy, and their cooking was careless—to put it charitably. By the time of the merger, many chicken lovers had switched allegiance away from Kentucky Fried and were flocking to a number of newly hatched competitors. Things got so bad that Kentucky Fried was even denounced by its own trademark—a humiliation surely unique in the annals of American business. The late Colonel Harland Sanders, who was paid $200,000 a year to serve as KFC's "goodwill ambassador," couldn't conceal his displeasure with the restaurants he visited, and he told anyone who would listen that he found the food inedible.

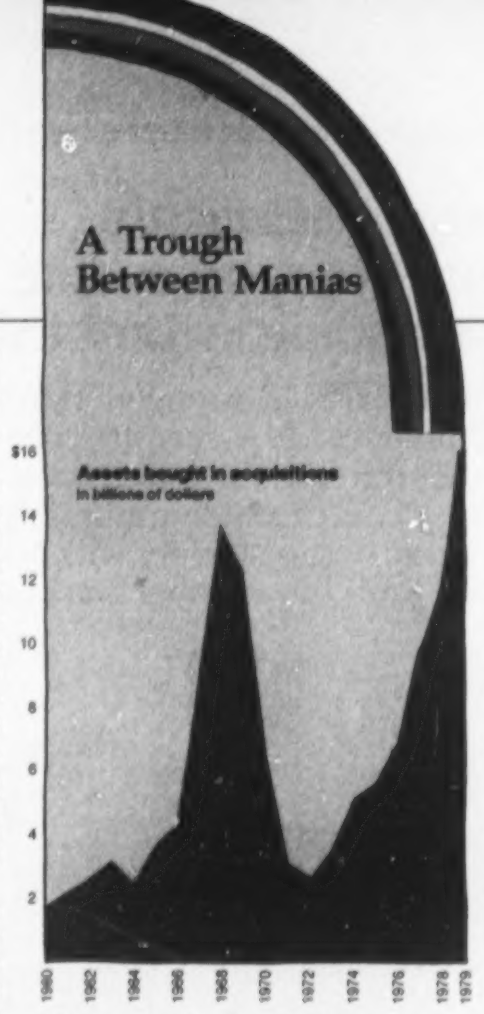
Heublein made some blunders of its own after taking over Kentucky Fried. It bought a company that raised and processed chickens. The operation seesawed between profit and loss and was sold within five years. The new management even rediversified, adding spareribs to the standard menu and buying a chain of Mexican restaurants.

Heublein finally began turning KFC around early in 1978, after firing some of the top managers it had installed in 1971. A new president of KFC organized a compulsory training program for restaurant employees. He redesigned the restaurants and suspended the latest diversification, once again focusing full attention on chicken. These tactics worked. KFC began to make sharp gains in earnings while other fast-food operators remained stranded on a plateau. By 1981 KFC was earning an estimated $22-million profit on sales of more than $600 million—not good considering Heublein's investment in the business, but clearly an improvement.

A tacky performance at Ritz

While Kentucky Fried Chicken was already in trouble when it was acquired, Lanvin-Charles of the Ritz was in good shape until it merged with Squibb Corp. Squibb, a drug manufacturer and food processor, exchanged $206 million in stock for Lanvin, a maker of cosmetics and fragrances. Lanvin's operating profits, $14.4 million in 1970, bottomed out at around $8 million in 1975. Richard M. Furlaud, Squibb's chief executive both now

A Trough Between Manias



Mergers were few in 1971, the base year of FORTUNE's study. The mania of the 1960s had [illegible]ased, while today's was still far off. The FTC statistics here include only acquisitions of industrial companies with assets of at least $10 million. W.T. Grimm data for 1980 and 1981 show mergers continuing to increase.

and at the time of the merger, is willing to accept much of the blame. "We made mistakes in terms of people and marketing," he admits. "We didn't understand the business."

After completing the merger, Squibb brought in a textile executive to serve as head of the Lanvin subsidiary and he hired other outsiders. Lanvin executives who could have provided valuable know-how were ousted. The new management's inexperience showed itself in embarrassing ways. For example, it nearly destroyed the highly successful Jean Naté line of toiletries by offering it to retailers at a discount in hopes of sharply boosting sales. Management evidently didn't realize that in such goods a discount is normally a tip-off that the product has flopped. Many buyers shrank from Jean Naté, and it was several years before volume was restored.

Lanvin-Charles of the Ritz began to prosper once again in 1976 under a new boss. He brought in a battalion of creative people who knew the industry well, and they bolstered the company. Lanvin also introduced two fragrances abroad, Opium and Enjoli, which it built into dazzling successes.

Squibb, however, felt confined because it held only the U.S. and Canadian rights to the Lanvin trademark, while the overseas rights belonged to the Lanvin family, which is based in Paris. So Squibb sold its rights to the family, realizing a capital gain of $6 million. Charles of the Ritz, which Squibb retained, produced sales of $325 million, operating profits of $28 million, and estimated net income of $15 million during 1981.

Among the deals we considered, only General Host's acquisition of Cudahy can fairly be described as an unmitigated disaster. General Host, which made baked goods and ran a chain of food stores, had been eager to get into the meatpacking business. Thwarted in an attempt to take over Armour—Greyhound Corp. won *that* dubious prize—General Host settled instead for Cudahy, which earned a profit of $6.1 million during its 1971 fiscal year. In a public statement, General Host's management congratulated itself on acquiring a business with "proven earnings."

The timing couldn't have been worse. The meatpacking industry was on the eve of revolution, and old-fashioned packers such as Cudahy, Armour, Swift, and Wilson were too clumsy to adapt. Newer, more aggressive, more flexible packers, like Iowa Beef Processors, built automated plants that added greatly to efficiency. The newcomers steadily drained business away from the older packers.

The turmoil was accentuated by a livestock market suddenly gone haywire. Violent fluctuations buffeted the production and prices of hogs and cattle during the Seventies and into the Eighties. The meat business of Cudahy—that company with "proven earnings"—lost money in 1975 and 1976, was profitable in the next three years, then began losing again. The bulk of its operations was sold last August for $28 million. Harris J. Ashton, General Host's chairman and chief executive for the past 12 years, expresses palpable relief at his escape. "I don't need those headaches anymore," he exclaims.

The acquirers were down the list

Our study of conglomerate mergers provides some useful lessons. For one thing, it strongly supports the notion that investing in unfamiliar businesses is unduly perilous—just as the critics maintain. Most of the acquirers evidently were lured into buying unstable companies, or into committing foolish mistakes that harmed stable ones. Only two mergers in our study—ITT-Scott and Johns Manville-Holophane—remained trouble-free from beginning to end of the decade.

Another important point concerns the acquiring companies. Most turned out to be bad investments over the past decade. Only one, Northwest, ranked among the FORTUNE 500's top 50 companies in total return to investors for the ten-year period ending with 1981—its standing was 38th—and no other acquirer even made the upper half of the 500. Five of the acquirers—Heublein, RCA, ITT, Schering-Plough, and Johns-Manville (now renamed Manville Corp.)—actually showed a negative return. Anyone who bought stock in these companies at the end of 1971, reinvested dividends, and held on would have lost money. (General Host does not appear on the 500 list this year, so it doesn't figure in the rankings.)

These performances suggest some intriguing conclusions. It may be that the managements of the acquiring companies were aware that they were facing some lean years, and that they plunged into large mergers in the hope that this would improve their financial results. Another possible conclusion is more pointed: maybe stock-market investors should beware of companies that make large conglomerate mergers. ■

MONEYMAKERS

Buried in huge enterprises, thes

The Fortune 500's

by JOHN J. CURRAN

The FORTUNE 500 chronicles the colossal; sales and profits of the list's leading corporations are in the multiple billions. Easily overlooked in this corporate accounting is the business gem—the small product line that, through some stroke of fate or genius, showers profits on its owner out of all proportion to its size.

Companies aren't often called upon to reveal these tiny jewels. Reports to the SEC can hide them in a welter of other numbers. Financial analysts are more concerned with the prime movers, the big divisions, than they are with splinters from the giant oaks. In addition managements may have reason not to brag about these goodies: Spectacular returns, when revealed, tend to get noticed by potential competitors and complaining customers. At the Justice Department, conspicuous profits can provide a sign that competition isn't what it ought to be.

Where the calories count

This article identifies ten jewels buried in ten FORTUNE 500 companies. None contributes more than 10% of the corporation's sales; one is estimated to kick in less than .5%. But all provide outsize profits and earn remarkable returns on assets (see the table on page 102).

Gems can turn up in unlikely settings. H.J. Heinz subsists on such staples as pork and beans, but some of its plumpest profits have been coming from a business that helps the overindulgent take off weight. When Heinz acquired the Weight Watchers diet-food business in 1978, it also took title to an operation that runs **diet classes**. Since the classes are given mainly by franchisees under the Weight Watchers name, Heinz hardly works up a sweat. The franchisees pick up their own expenses except for marketing, and feed 10% of their take back to the parent. Heinz counts the calories on the bottom line: return on assets runs better than 30%.

A proprietary license can be a license to mint money. Five years ago Becton Dickinson bought rights to **the Levine shunt**, a surgical implant named after the doctor who developed it. A pressure-activated valve, it is implanted in cirrhosis-of-the-liver patients to rid them of life-threatening fluids that collect in the abdominal cavity. The valve isn't cheap. Essentially a piece of silicone rubber, it sells for just under $400, but relieves patients of costly hospital stays. Becton Dickinson is loath to discuss markups for fear of incurring the wrath of cost-containment crusaders. In the executive dining room, however, it's acknowledged that the product shunts plenty of cash into corporate coffers.

A licensee is best off cutting a deal before the licenser knows he's got a winner and jacks up the fee. General Mills picked up exclusive rights to **Star Wars toys** before the first theater ticket had been sold and has been milling big profits ever since. The terms of the deal were generous largely because marketing maxims suggested that kids wouldn't identify with characters on the big screen the way they do with TV stars. Within a year of the film's release, General Mills was riding the hottest thing to hit the children's toy market since Barbie dolls.

Smart planning has undoubtedly produced some precious stones, but it's of-

Dart & Kraft's Tupperware

Plastic Tupperware containers are peddled to housewives through the party plan. But the real celebration begins once the parties are over and Dart & Kraft gets to count the take.

relatively small businesses yield enormous profits.

Hidden Gems

ten better to be lucky. Continental Group, the forest-products and packaging giant, found surprising growth in a business not known for liveliness—**life insurance**. A few years back Continental was searching for a cheap way to smooth out cyclical earnings; insurance can provide opportunities to take capital gains when needed. With price in mind, an investment banker suggested the Richmond Corp., a sickly operation that had just taken a bath in the casualty business. S. Bruce Smart Jr., 59, Continental's chief executive, wasn't looking to Richmond for salvation. "That business," he says, "was no Sir Galahad."

What Smart and his colleagues didn't know was that the creative minds at Life of Virginia, Richmond's principal asset, were about to start tinkering with a product that would revolutionize life insurance. Within a few years Life of Virginia became the first major life company to plunge into the market with a "universal life" policy. Demand for the product, sort of a hybrid of term insurance and a money-market fund, took off almost immediately. Last year Life of Virginia's policy, called the Challenger, kicked the company's insurance sales growth from 5% a year to 23%.

The 350-ton mistake

Ethyl Corp. had an even bigger dose of good fortune in its acquisition of **Elk Horn Coal**. Though companies have bought coal reserves recently for astronomical prices, Ethyl bought Elk Horn three months before the Arab oil embargo ended and long before anyone realized what the full impact of the oil-price increases would be. Nor was that the end of Ethyl's luck. Engineers sent to survey Elk Horn's properties in Kentucky after the deal was made came back with startling news. Though Elk Horn had claimed reserves of some 250 million tons, the actual number was closer to 600 million. This double scoop of happiness is now worth close to six times the original price. Says John Gottwald, who is the son of Ethyl's chairman and presides over the family jewel, "It was one damned fine investment."

Glittering businesses can bring glittering prices on the acquisition block, so payoffs can be better from pearls that are cultured in-house. United Brands had a diamond in the rough sitting in the Central American jungle for 70 years before the company discerned its value. Back at the turn of the century United Fruit, as it was then called, built a telegraph system in Panama and Honduras. The **Tropical Radio Telegraph** subsidiary carried some outside traffic but was used mainly to find out when the company's banana crop was ready for shipment. The system never made much money, and in the early Seventies United Brands tried unsuccessfully to unload it.

Stuck with the business, management decided to turn it loose against the major telecommunications carriers. Within a few years the subsidiary, its name modernized to TRT Telecommunications, had received FCC approval to serve Europe and the Far East. Up against RCA, ITT, and their ilk, TRT slashed telex rates, some by more than 20%, and dispatched "Battlegrams" to prospective clients alerting them to the price cuts. The bellicosity paid off. In the last couple of years, TRT has won over such major clients as Merrill Lynch and Coca-Cola and has claimed 11% of the U.S.-based international telex business.

Mead Corp. set its sights on a tiny niche in the computer-software market and was surprised by what it came up with. **Lexis**, a random-access data base for the legal profession, offers a vast store of legal information that can be summoned with the touch of a few buttons. In a matter of seconds, lawyers can obtain an obscure legal reference that used to require hours of tedious bookworming. If an attorney finds himself confronting an unfamiliar judge, Lexis can tell him how that judge has ruled on particular kinds of cases in the past.

Though the product now earns Mead's highest return on sales, the road to Golconda wasn't without potholes. Based in Dayton, the company originally planned to restrict Lexis to its home state and figured that producing the system would require little more than throwing Ohio's law books on a keypuncher's desk. But the idea soon went nationwide, and learning how to call all that information onto a computer screen turned out to be complicated. "We figured we could do it for half a million," recalls James McSwiney, 66, Mead's chairman, "and we did—$27 million later."

continued

United Brands' TRT Telecommunications

Back at the turn of the century, United Brands set up a small telegraph network to keep in touch with its foreign plantations. Seventy years later it became the key to big profits.

A Sampling from the Jewel Box

Company	FORTUNE 500 rank	Business gem	Share of revenues	Share of operating profit	Return on assets
GENERAL ELECTRIC	11	*Quartz products*	under 1%*	under 1%*	over 30%*
DART & KRAFT	29	*Tupperware*	8.5%*	28%*	40%*
CONTINENTAL GROUP	74	*Life insurance*	5%	13%	2.4%
GENERAL MILLS	80	*Star Wars toys*	3%*	6%*	40%*
UNITED BRANDS	95	*Telecommunications*	2%	13%	21%
H.J. HEINZ	111	*Diet classes*	1.5%	over 2%	over 30%
MEAD	146	*Legal-data retrieval*	2%*	7%*	30%*
ETHYL	214	*Coal*	1%	5.7%	52%
BECTON DICKINSON	200	*Levine shunt*	under .5%*	2%*	over 30%*
DOVER	311	*Sucker rods*	10%*	20%*	over 80%*

*FORTUNE estimate.

Gems don't have to be big to be beautiful. All these businesses produce far fatter slices of their owners' profits than of sales. General Electric is so large that its quartz business accounts for less than 1% of sales and earnings, but the operation sparkles in return on assets. While the return earned by Continental Group's life-insurance subsidiary looks small, it's terrific by industry standards. Most of Ethyl Corp.'s jewel still lies underground appreciating. Since the vast coal reserves are carried on Ethyl's books at a fraction of market value, the company needs to sell only a sliver of its holdings annually to send the return on assets sky high.

That wasn't the company's only miscalculation. The steep fees Mead planned to charge suggested that only the biggest law firms could afford the service. But fortunately for Mead, lawyers aren't prone to stand idly by while their competitors get an edge. Within a few years Mead had signed up not only the top 200 law firms but over 1,000 smaller ones as well. Some use 100 or more terminals so each associate can have one. Over 100 corporations have also picked up the system and, to cut hourly fees, some insist that their outside counsel use it. Mead will soon introduce a portable terminal that can be coupled to a telephone outside a courtroom. The company's jump on the market, combined with the cost of developing the system, has so far discouraged competitors from muscling in. Last year Lexis's revenues topped $40 million, with operating profits estimated at about $8 million.

Dover Corp., one of the FORTUNE 500's more taciturn members, has taken in a bellyful of earnings by going after markets too small to arouse the appetites of competitors. Its products range from nozzles for gas-station pumps to clip closures, the twisted wires used to seal meat packages. The strategy has produced plenty of winners. The company, organized in the mid-Fifties with a big helping of old English money, leads the market in 20 of its 25 product lines.

Dover's sweetest victory belongs to its Tulsa-based Norris division, a producer of sundry valves and pumps for oil producers. Norris's hottest item is **the sucker rod**. These forged-steel poles are produced in 25-foot lengths and then coupled together to extend up to 12,000 feet. They are plunged deep into the bowels of an oil well to work a pump at the bottom.

Sucker rods were once the province of the major steel producers, but the skinny poles didn't generate enough revenue to draw much interest on the part of the big mills. Unbeguiled by sheer volume, Norris moved in, took better than half the market, and set a new standard for sucker-rod quality. Quality is no small matter in this business, since a broken rod 5,000 feet down can stall production for days. Although the price per foot is low, usually under $2, the rods last year provided an estimated 10% of Dover's $1.03 billion in sales and 20% of its $188 million in operating earnings.

Norris hasn't felt the drop in oil prices yet and isn't much worried. Eyes in Tulsa are turned toward the Middle East. Reservoir pressures there are high enough that the oil doesn't need pumping. But Edwin L. Bechtold, president of Norris, exudes the quiet confidence of an undertaker: "Sooner or later they'll come around."

Profits from purity

Some companies are of such size that money machines generating $10 million a year or more in sales are simply swamped by the larger divisions. General Electric has been producing **quartz products** for nearly 40 years. Quartz is an unexciting but necessary component in high-temperature lamps like those used in street-

continued

Dover Corp.'s Sucker Rods

Sucker rods, used to pump oil, didn't really get hot until the energy hunt became a national pastime. Since then, Dover has been forging returns that would raise even an oilman's eyebrows.

lights. While GE sold some quartz products to others, that was secondary to their use in the lighting business—until silicon semiconductor chips came along.

Quartz, it turns out, is one of the few materials capable of withstanding the intense heat required to produce single-crystal silicon. One of GE's hottest items is a quartz crucible that cradles molten silicon throughout the crystal-growing process, which lasts about a day at temperatures exceeding 1,400° C. GE has mastered the technology to turn out crucibles of extremely high purity, needed to prevent contamination of the silicon. Motorola alone buys over $1 million in quartz products annually from GE.

The refractive qualities of quartz make it important to another new technology: it's the perfect coating for hair-thin optical fibers now being used to transmit telephone signals. Narrow quartz tubes are lined with glass and then melted, at 1,800° to 1,900° C., to form a solid rod from which the optical strands are drawn. Demand from chipmakers softened last year, but this new application and increased foreign business kept sales growth robust. Overall sales have doubled since 1978 and profits have more than tripled.

When a product has no unique qualities, creative marketing may be called for. Dart & Kraft's **Tupperware** containers boast no great distinction other than the capacity to burp out air and preserve the freshness of perishable foods. The magic of this business is in the method. The products are sold through the party plan, a system not unique to the Tupperware crowd but one they certainly have mastered. The company recruits housewives, thousands of them, to hawk its wares at orchestrated neighborhood parties. That may sound a bit hokey, but the estimated 30% operating margins sure aren't.

How to give a party

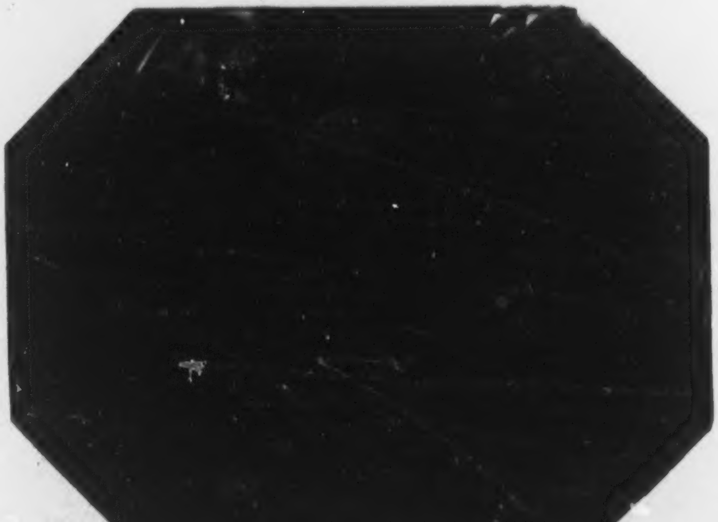
Tupperware is one of the few American consumer products to have crashed into Japan in a big way. "Our first few parties were real flops," recalls an executive familiar with the campaign to crack that market. Japanese housewives were too reserved to throng to Tupperware parties. The secret, executives soon discovered, was to combine Tupperware sales with flower-arrangement classes and tea ceremonies, near obsessions among Japanese women. Party attendance quickly took off. Sales from Japan now account for 10% of Tupperware's total, with seaweed containers and sushi lunch pails going like ricecakes. Tupperware isn't immune to recessions—sales per party decline—but the number of parties held increases as more women take up the cause. During the first two weeks of this year the worldwide network of women threw better than one million parties, a veritable Tupperware orgy.

FORTUNE 500 companies undoubtedly harbor plenty of other hidden gems. Gulf & Western, for example, appears to have found heavenly returns by providing eternal resting space for the departed. G&W fell into the casket business when it acquired Simmons, the mattress make, which ran the operation on the side. Customers must have been satisfied: Simmons was No. 2 in the casket industry.

Shortly after taking over Simmons, G&W bought the third-largest casket maker in 1980. G&W has been keeping mum about casket profits, but Pamela Singleton, a Merrill Lynch analyst who follows the industry, notes that operating margins can easily exceed 20% in good years. When a star shines brightly enough, it's hard to keep people from noticing. In this case, the noticer was the Federal Trade Commission's antitrust squad, which is challenging the latest acquisition.

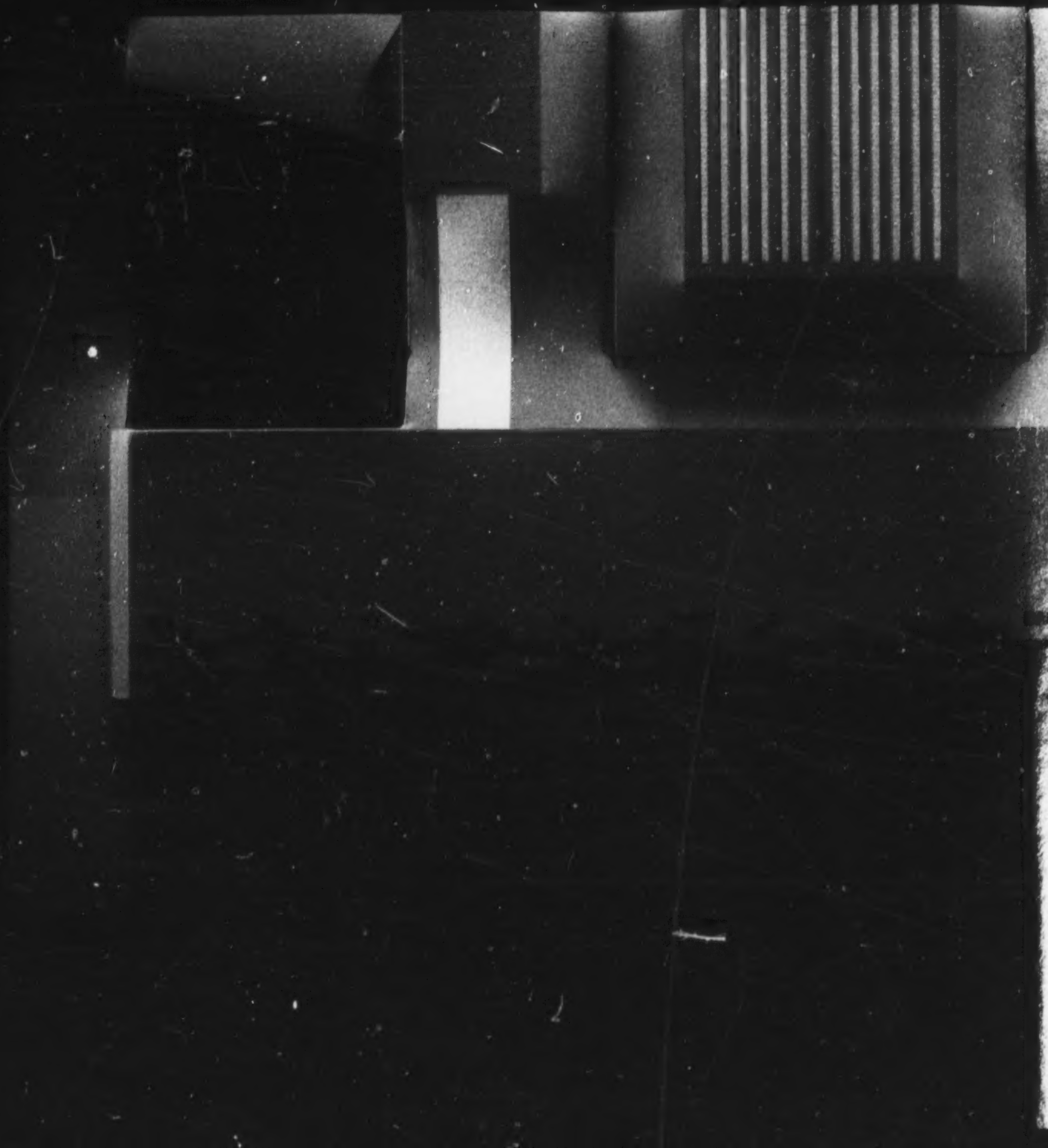
General Electric's Quartz Products

High technology is casting a glow on GE's 38-year-old quartz business. The crucibles are used to grow silicon crystals for semiconductors, the tubes to make fiber-optic cable.



INDUSTRIAL AND FARM EQUIPMENT

	1981	1980
Number of companies on the 500	44	43
Sales ($ millions)	76,740	71,825
Net income ($ millions)	4,351	3,147
Median return on equity (%)	13.9	13.3
Number of employees	989,294	1,016,711
Median sales per employee ($)	76,804	69,779
Median total return to investors (%)	-10.29	23.95



BOLD EVOCATIONS OF BIG INDUSTRIES

Even in turbulent times, some things about the industries of the FORTUNE 500 stay fairly constant. Among the seven largest, portrayed in this portfolio, only one has changed markedly over the past year: food lost almost $5 billion in sales when Occidental Petroleum acquired Iowa Beef Processors.

Equally enduring are the images the industries evoke, from the cleated tires of an earthmover to the rigid geometry of a circuit board. FORTUNE commissioned these works from Philadelphia artist Steve Tarantal, who sawed shapes out of masonite and plywood, stretched canvas over them, then splashed jutting screws and pipes, pulleys and flasks with bold colors he calls "joyous and celebrational." Tarantal harvested most of his impressions from workaday things—the back of a radio, cans stacked on a shelf—but for "chemicals" he imagined an explosion scattering molecules.

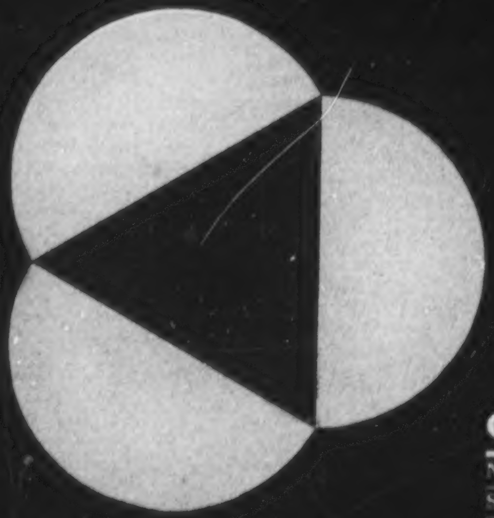
Paintings by Steve Tarantal
Photographed by Seymour Mednick

PETROLEUM REFINING

	1981	1980
Number of companies on the 500	41	41
Sales ($ millions)	561,097	510,901
Net income ($ millions)	27,435	30,001
Median return on equity (%)	16.4	19.4
Number of employees	1,255,613	1,203,477
Median sales per employee ($)	512,868	441,544
Median total return to investors (%)	-23.17	53.09

MOTOR VEHICLES

	1981	1980
Number of companies on the 500	16	19
Sales ($ millions)	149,115	138,544
Net income ($ millions)	-459	-3,134
Median return on equity (%)	7.6	8.1
Number of employees	1,706,186	1,776,026
Median sales per employee ($)	78,790	68,819
Median total return to investors (%)	-4.45	3.39



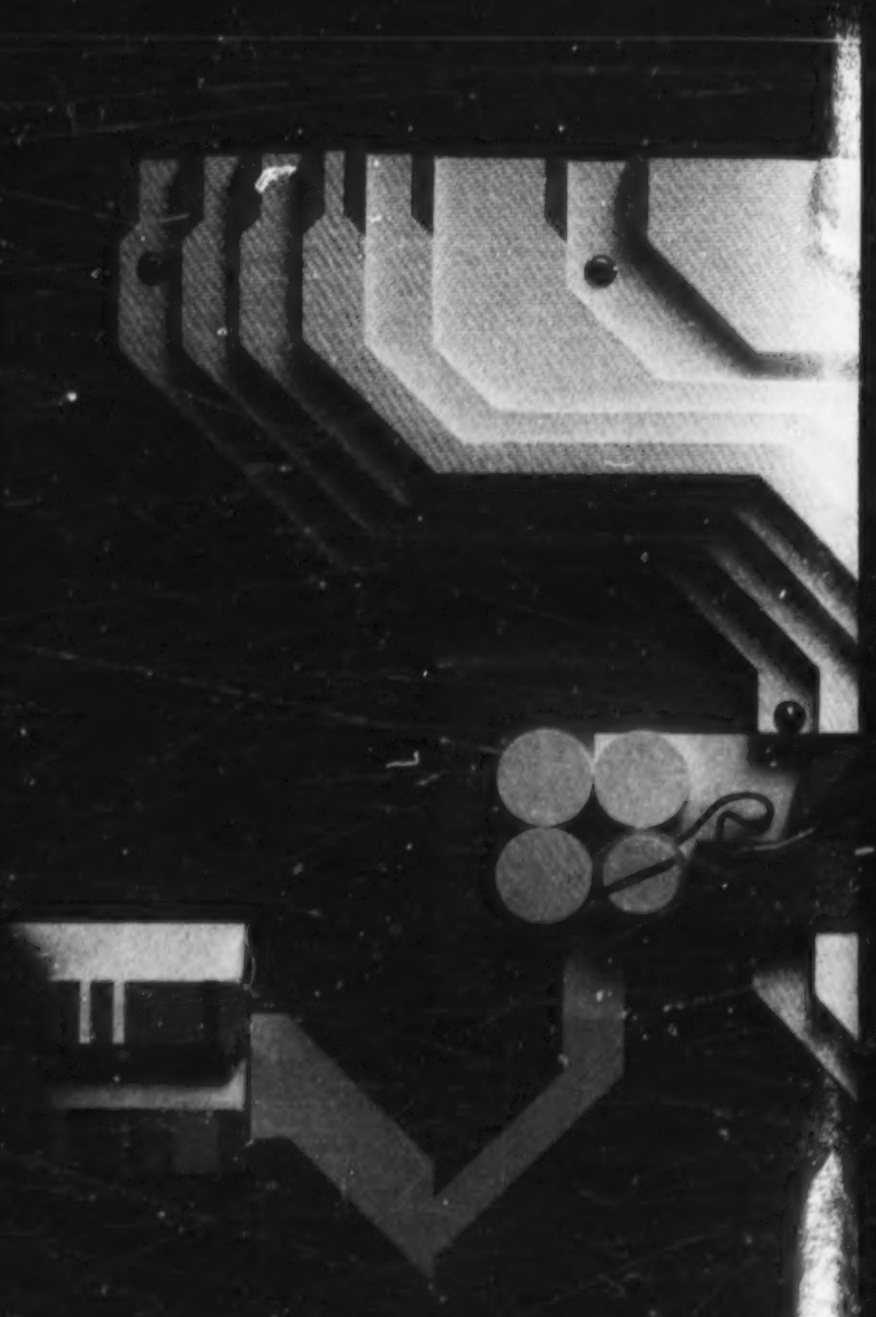
CHEMICALS	1981	1980
Number of companies on the 500	43	40
Sales ($ millions)	118,816	95,665
Net income ($ millions)	6,951	5,153
Median return on equity (%)	13.5	13.9
Number of employees	1,028,350	930,939
Median sales per employee ($)	119,395	100,456
Median total return to investors (%)	-.95	16.65

METAL MANUFACTURING

METAL MANUFACTURING	1981	1980
Number of companies on the 500	38	38
Sales ($ millions)	94,744	90,373
Net income ($ millions)	4,413	4,471
Median return on equity (%)	12.4	12.9
Number of employees	857,447	970,427
Median sales per employee ($)	107,165	96,031
Median total return to investors (%)	6.08	20.69

FOOD

FOOD	1981	1980
Number of companies on the 500	50	54
Sales ($ millions)	123,873	130,068
Net income ($ millions)	4,182	4,419
Median return on equity (%)	14.4	14.5
Number of employees	1,160,014	1,337,986
Median sales per employee ($)	114,979	103,004
Median total return to investors (%)	18.15	9.81



ELECTRONICS, APPLIANCES

	1981	1980
Number of companies on the 500	38	37
Sales ($ millions)	135,770	125,387
Net income ($ millions)	6,410	6,540
Median return on equity (%)	14.3	16.2
Number of employees	2,185,781	2,189,351
Median sales per employee ($)	60,385	53,981
Median total return to investors (%)	39	36.07

AUTOMATION

What's Detaining the Office of the Future

by BRO UTTAL

Since the middle 1970s "the office of the future" has been perceived as a sort of promised land. Designers dream of applying computer power to office work by putting a keyboard and a video screen on almost everybody's desk and connecting these "work stations" into networks. The systems will enable people to send and receive information in written and graphic form, to edit material punched up on their screens, and to draw data from files both inside and outside their offices. The point is to simplify the transfer and analysis of information, which are the major elements of office work.

In contemplating this office-automation market, makers of computer and telecommunications equipment all but drool. According to one estimate, U.S. spending for advanced office gear should swell from nearly $3 billion last year to more than $12 billion in 1986 (see chart, page 184); the non-U.S. total could be half that large. Dozens of corporations are vying for pieces of the action. AT&T, IBM, and Xerox have declared the market a key to their futures. Late last year the top three minicomputer companies—Digital Equipment, Hewlett-Packard, and Data General—launched new office-automation systems within 30 days of one another. "So many companies have thrown their hats into the ring," one Hewlett-Packard manager jokes, "that the hats are landing on top of each other."

The congestion is also caused by a major problem in the market, which is that few customers have yet ventured to buy the dream. A small cadre of leading-edge users does exist: Atlantic Richfield, Aetna, Avon Products, some branches of government, such as the Department of Transportation. Then there is the rest of the customer world, most of it hanging on the trailing edge. According to Wang Laboratories, still another important manufacturer chasing the business, only 60 or so of the largest industrial corporations have acquired as many as 100 office work stations. A much smaller number have linked them into pervasive networks. Demand has simply developed more slowly than anyone thought it would a few years ago.

The result is a market that has the vendors behaving like schizophrenics. To keep up with the leading-edge users and to get set for the day when the bulk of customers finally convert to advanced equipment, IBM, Wang, and others have spent lavishly on developing and promoting exotic systems. But the current market for such devices is so narrow that profits won't show up for years. "We 'gee-whiz' the customer with the office of the future," says Edward P. Gistaro, president of Datapoint, a Texas manufacturer, "but he buys one of our plain minicomputers. That's the way it is for all the vendors."

The vendors, though, are far from giving up. They've laid technological siege to customers and last year buttressed their sales efforts with over $33 million in splashy advertising for components of the electronic office. The customers are showing signs of exhaustion. Jim Candler, staff consultant for office automation at Federal Express, yearns for "a breathing spell." Otherwise, he says, "the users will burn out from an overdose of technology and unfulfilled expectations." One leading-edge user speaks for most customers when he protests: "We don't need any more technology; we need to find out how to use what we've got."

Sinking under the overhead

The powerful basic reason for automating offices is that white-collar salaries are a huge and intractable cost of doing business. In 1980 60% of the $1.3 trillion paid out for wages, salaries, and benefits in the U.S. went to office workers. The productivity of white-collar workers is hard to measure, but it probably hasn't risen much. American business often seems to be sinking under the burden of administrative overhead.

Meanwhile the prices of electronics have

Most chief executives aren't comfortable at keyboards, one reason office automation hasn't swept the corporate world. But Ben W. Heineman (right), president of Northwest Industries, uses a $4-million computer system to analyze his operations. It makes him "20 times more efficient," he says.

Michael Weinstein

Research associate: Peter D. Petre

Jerry Sarapochiello

This buffet of office technology includes, at upper right, a red IBM electronic typewriter; next, proceeding clockwise, Wang's Wangwriter; AT&T's antenna-like microphone for telephone conferences; a Rolm computerized switchboard; Xerox's video screen for controlling electronic files and, in back of the screen, a Xerox Star work station; an NBI controller used for linking word processors. The aluminum casting in the center is part of an IBM laser printer.

been falling. Computer memory has become cheaper at a compound annual rate of 42% over the last five years, and the price of the logic chips that give computers their intelligence has dropped about 28% a year. So, say the vendors, the way for business to rescue itself is to substitute electronics for labor. Vendors have pounded a theme: offices are unproductive because business has backed up each office worker with only about $2,500 in capital investment vs. around ten times that amount for each factory worker. Therefore, claim the vendors, business should make massive new investments in automation.

That argument has major flaws, beginning with the numbers. Michael D. Zisman, president of Integrated Technologies, an office-systems consulting firm, is often cited as the source of the investment figure for office workers, which he used in a 1978 article for the *Sloan Management Review*, published by MIT's business school. Zisman now says, "I relied on that number because it was the received wisdom, but I've since found out it's plain folklore. Investment looks low because companies expense their office-related costs instead of capitalizing them. If you capitalize actual expense streams for the office, you'll find companies have already invested $15,000 to $20,000 per office worker, which is pretty damned high."

Moreover, the substitution of machine power for human labor does not increase productivity in an office as straightforwardly as it does in a factory. Paul A. Strassmann, a Xerox vice president who has spent the last 25 years helping to automate offices, notes: "We're still deeply rooted in industrial-engineering concepts of efficiency, but office technology doesn't achieve its most powerful effects primarily by mechanizing what people are doing already. Instead, it simplifies tasks and eliminates unnecessary job steps." Using a powerful work station, for example, a manager can draft a report, create and insert charts and tables, revise, and print the text without leaving his desk or waiting for work to come back from other people, such as secretaries or staff analysts, who once would have been involved.

In other words, the technology works best when it reorganizes the ways in which work is done. The creation of a sophisticated electronic office therefore calls for lots of planning, training, and continuing supervision. Strassmann estimates these activities cost as much as the technology itself. Yet customers often ignore such costs when calculating the financial burden of automating.

In figuring the benefits, office managers tend in turn to focus too much on individual output. Instead, since office automation changes patterns of working,

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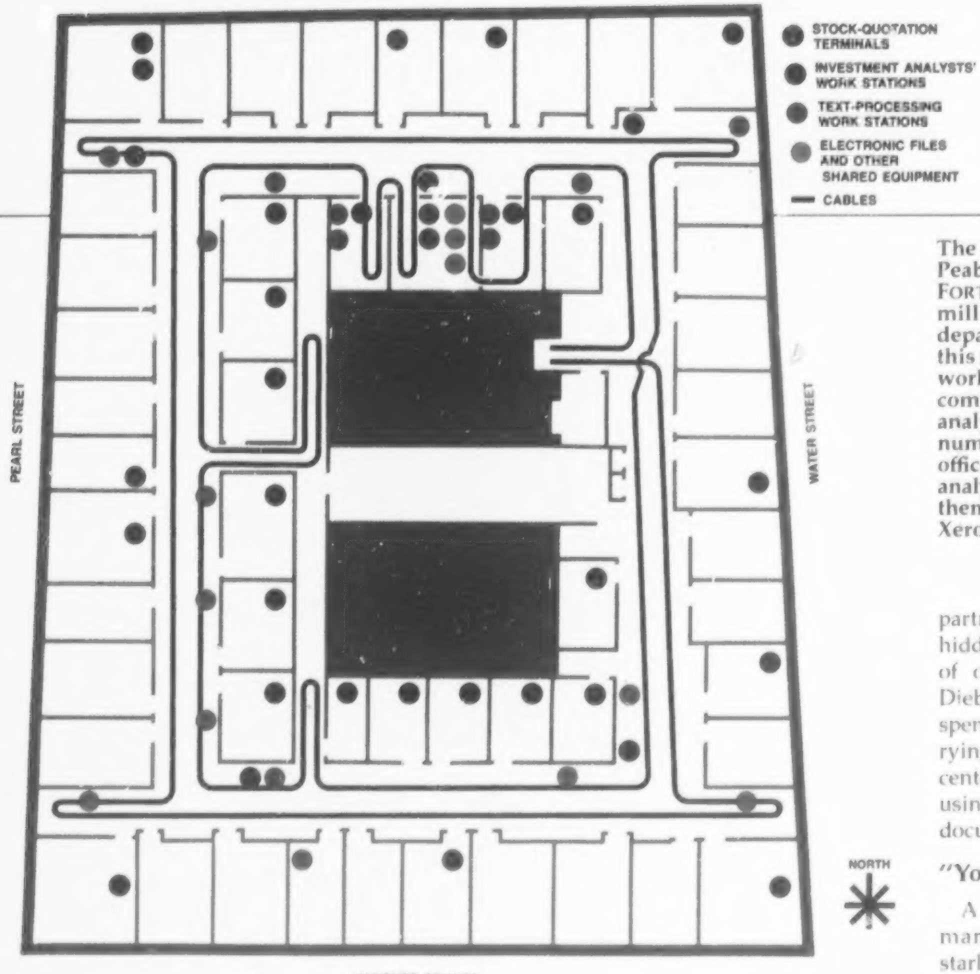
THE VIEW ON KIDDER PEABODY'S 16th FLOOR


● STOCK-QUOTATION TERMINALS
● INVESTMENT ANALYSTS' WORK STATIONS
● TEXT-PROCESSING WORK STATIONS
● ELECTRONIC FILES AND OTHER SHARED EQUIPMENT
— CABLES
PEARL STREET
WATER STREET
HANOVER SQUARE
NORTH

The New York brokerage firm Kidder Peabody & Co. is spending big money—FORTUNE estimates more than $1 million—automating its research department, part of which is outfitted as this floor plan indicates. The red-dot work stations—Xerox personal computers—include a few used by analysts in outside offices and a larger number for analysts' assistants in inside offices. Wiring is in place to allow all analysts to hook up if the mood strikes them. The green-dot work stations are Xerox word processors and Stars.

customers should be examining their organization's overall productivity. Strassmann is working with two consulting firms, the Diebold Group and the Strategic Planning Institute, to find out how much office-technology investments add to the total value—that is, profits—that organizations produce. The lack of convincing studies on this subject surely has heightened customers' reluctance to plow ahead with automation.

What IBM thought up

Because adapting highly structured electronic systems to the unstructured flow of office work is a tall order, it's the more routine tasks that have been automated so far. The concept that's gone furthest is word processing, a term IBM thought up in 1964 to describe electronic ways of handling a standard set of office activities—composing, revising, printing, and filing letters and other written material. The worldwide market for word processors (not including specialized copy-processing systems, such as those used in newspaper offices) has exploded at some 50% a year since 1975, according to Sanford J. Garrett, a security analyst at Paine Webber who specializes in office-technology companies. This year the value of shipments should reach $4 billion.

Users have taken word processors to their bosoms because the devices appear to increase the productivity of secretaries, as measured by the number of pages typed per hour. But some office-automation experts believe customers often do an incomplete job of measuring the costs. Until recently, word processors have been complex and expensive. (Even now, the simplest system costs at least $6,000.) Trying to use the devices efficiently, many buyers set up centralized word-processing departments. That approach creates a lot of hidden overhead. Thomas M. Lodahl, head of office-automation consulting for the Diebold Group, says that often the time spent scheduling, administering, and carrying copy to and from a word-processing center wipes out the time saved directly by using the machines to compose and revise documents.

"You can't get hard proof"

A recent study by SRI International, the market-research firm, states the case starkly. After surveying 4,000 offices to find out which activities could be automated at a profit, SRI discovered that in all but special cases, such as legal departments, there were few direct cost savings from any current form of office automation, including word processing. The study left open the possibility that indirect benefits make word processing worthwhile. But those benefits are extremely hard to measure. Patricia B. Seybold, who has reviewed dozens of word processors in her newsletter, *The Seybold Report on Office Systems*, says: "The organizational benefits of word processing, such as making work flow more smoothly or sending off a bid more quickly, are so intangible that you can't get hard proof of dramatic savings."

Still, the word-processing market is likely to keep bounding ahead. For one thing, many secretaries have come to see a word processor as a standard perquisite. Before accepting a new job, legal secretaries sometimes insist on having a word

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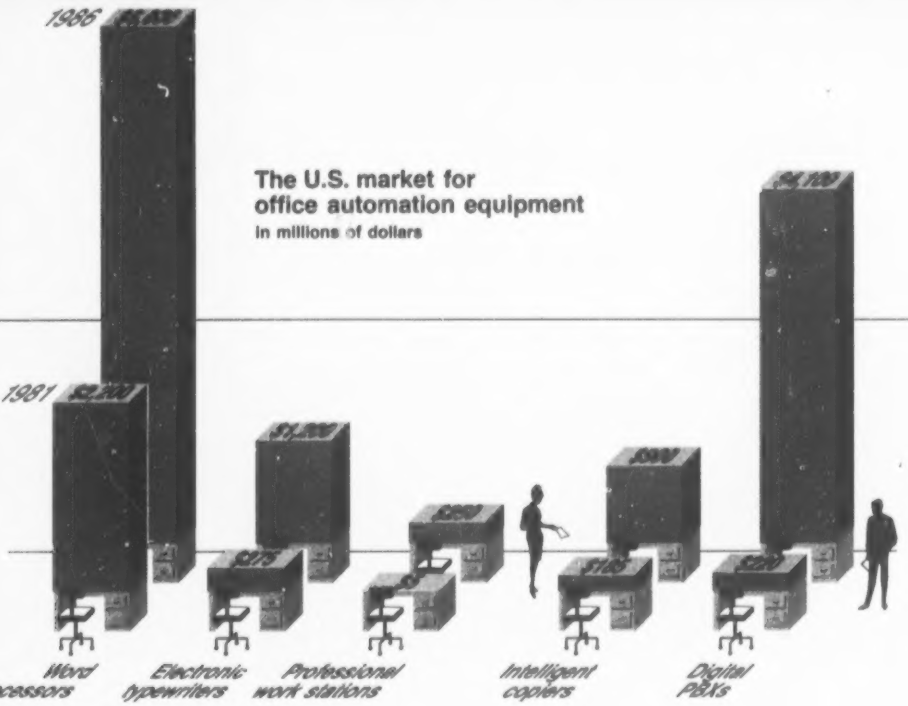

High Hopes for Growth

U.S. shipments of gear that can be linked up to form electronic offices should grow 34% a year through 1986, according to Dataquest Inc. Intelligent copiers use lasers to print copy from computer data; the shipment figures here include digital facsimile machines. Digital PBXs are switchboards, among them some designed to handle telephones and computer terminals simultaneously.

processor from NBI, which has specialized in systems for handling long, complex documents that use lots of boilerplate. Many people who type less specialized material covet Wang word processors, which are relatively easy to use and so widespread they've achieved the status of basic equipment.

Growth will also come because the market is far from saturated. Charles C. Hall, vice president for word processing at Lanier Business Products, estimates that about 500,000 secretaries now have word processors and that about as many more do enough typing to be logical prospects for getting one. Hall adds, "As secretarial salaries rise and our prices drop, it will be easier to justify the cost of a word processor for even the light typist." Other corporate buyers will want the machines for the qualitative benefits they offer. Says Frank Gatewood, who's been putting in word processors for years at Bank of America: "The fact that you can quickly do one more revision of a proposal may make all the difference in your getting the business."

Once anybody uses a word processor or any type of work station successfully, he tends to be a lifelong convert. "You can't do pilot projects," says Joe Ramellini, manager of office systems for CBS. "If users like the equipment, they'll chain themselves to it rather than let you remove it." Sellers and buyers alike compare the compulsive appeal of work stations to that of peanuts, popcorn—and heroin. A psychologist called in by Xerox to evaluate the impact of removing work stations commented, "My God! I haven't seen dependence like this outside a methadone clinic."

Companies that want to make it big in office automation are exploiting that appeal. The most successful vendors court the end user and are actually encouraged to do so by most corporate customers: these buyers will designate "preferred" vendors but leave the final decisions to the line managers and secretaries who have to use the gear. In one effort to get down to the grass roots, Digital Equipment allowed three of its executive secretaries to give public seminars on word processing at two hotels near Boston. About 1,100 secretaries showed up and Digital now plans to give similar presentations around the country.

Since a manufacturer who puts any sort of usable work station on a desk has excellent prospects for getting all new business from that desk for years, sellers are racing to put work stations in place. Last November Xerox announced a new line of electronic typewriters designed to be upgraded into word processors after the company has seized legions of desks. In 1980 IBM shook up the industry by launching a cut-price word processor called the Displaywriter, and competitors have followed suit. There's a Wangwriter, a Docuwriter from NBI, an Infowriter from Honeywell, an Ofiswriter from Burroughs, and even an Apple Writer program that makes the Apple personal computer behave like a word processor. All these products are meant to be the first stage in an endless progression of upgrades.

Saving time with Stars

For office automation to realize its promise, the manufacturers must reach beyond the secretary to managers and professionals, who account for 80% of white-collar salaries. But word processors, says David Crockett of Dataquest, a California-based market-research firm, are "terrifying to non-secretaries because the keyboards look so complicated." So vendors are casting about for some other kind of work station attractive enough to overcome upper-echelon fears.

The main problem is specifying exactly what steps or processes managers and professionals go through in doing their jobs. Thanks to some 9,000 man-years of experiments, Xerox seems furthest along in understanding professionals—lawyers, engineers, market researchers, and the like. David E. Liddle, a vice president in Xerox's office-products division, points to four major "professional" activities: the communication of data and ideas that are still in a pliable state and being worked on by groups of professionals; the creation of documents; the filing and retrieval of documents; and the distribution of written work. Xerox's 8010 (commonly called Star), a professional work station introduced last year, seeks to automate those tasks, and Liddle reports impressive time savings (see "Xerox Xooms Toward the Office of the Future," FORTUNE, May 18,

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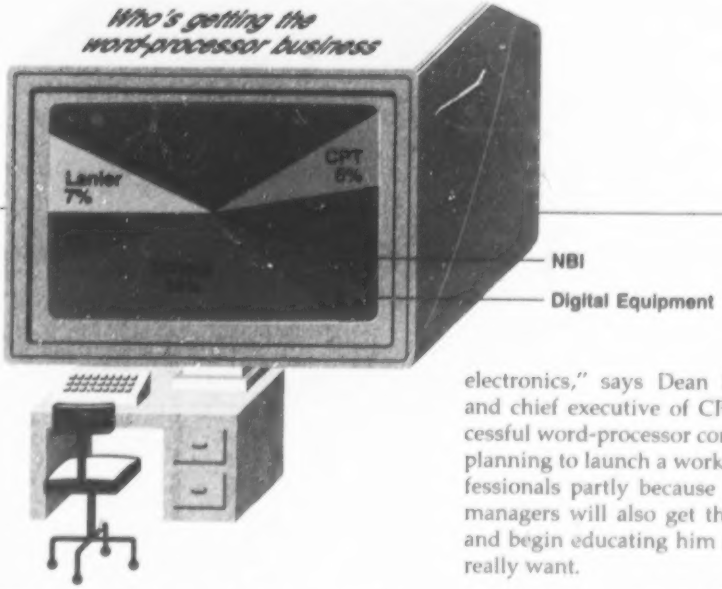

IBM Grabs More Desks

Last year, according to Paine Webber estimates, IBM nearly doubled its share of word processors shipped worldwide. Most early leaders, such as Vydec and Redactron, have slipped into insignificance.

1981). In tests by the company's own patent department, a Star system cut the average time needed to prepare a patent application from four weeks to one.

But a Star, which costs $15,000, doesn't work well standing alone; it needs to be hooked up with other equipment such as an electronic filing cabinet. That makes a Star system expensive. The average price of the 70 complete systems Xerox has installed for customers is $270,000. Personal computers may be better work stations for professionals since they cost less to begin with—about $5,000—and don't need much ancillary equipment. John Barry, a Xerox market strategist, says he recently talked with five large corporations that in total were considering the purchase of 100,000 personal computers.

They should be called rabbits

It's still challenging to learn how to use a personal computer, but for reasons of both utility and fashion, they're spreading through the office like a plague. (See "The Coming Struggle in Personal Computers," FORTUNE, June 29, 1981.) "Apples," jokes Lodahl of the Diebold Group, "should be called rabbits because they multiply so fast." He cites an example at CIL, a Canadian chemical company: "Two years ago one professional brought his Apple to work; now the company has 75 of them." Some consultants feel professionals will design their own offices of the future using personal computers as work stations. Established office-automation companies, having noted the spread of word-processing programs for personal computers, think turnabout is fair play. Low-end word processors from IBM, Wang, and NBI now run the most popular personal-computer programs.

Vendors of office-automation equipment dearly want to crack a higher market: executives. Strategically it's vital to put a useful work station on the managerial desk. "Once the top brass decide office automation is good," says the office-systems manager for one large company, "the return on investment for the gear doesn't matter. You buy it anyway." Two years ago at Lincoln National Life in Fort Wayne, Indiana, Chairman Ian Rolland started using a computer terminal to send and receive intra-office messages; now almost all top managers are tied into the system, the annual budget for office automation has risen 66% to $1.5 million, and Lincoln will add 150 terminals to the 600 it already has. Similar breakthroughs happened at Merrill Lynch a couple of years ago, after then Chairman Donald Regan started using a terminal, and at Northwest Industries, where President Ben Heineman has brought 120 of his managers into a system he helped design. When the boss gets a terminal, his team tags along, if only in self-defense. Mort Miller, who manages computer systems for Schering-Plough, says, "We're putting in electronic mail, and we're driving it from the top down. People have an incentive to use the system if the boss may have left them a message."

But top managers who feel comfortable with a computer terminal are rare; most executives are still technophobic. Vendors themselves puzzle over what kind of managerial system they should be pushing to handle work that is customarily diversified and amorphous. "Nobody knows how to make a manager more productive with electronics," says Dean Scheff, founder and chief executive of CPT Corp., a successful word-processor company. Scheff is planning to launch a work station for professionals partly because he hopes some managers will also get their hands on it and begin educating him as to what they really want.

Changing voices into digits

The first part of the office of the future that managers will accept may be an electronic mail system for sending and receiving messages at a video terminal. Since most executives chafe under the yoke of slow mail service, the electronic variety, which cuts the time needed to communicate from days or hours to seconds, has clear-cut appeal. This year, according to International Resource Development, a Connecticut-based market-research firm, U.S. business will spend some $20 million on computerized message systems that use video terminals.

The other early winner may be "voice store and forward," a system for changing voices into the digital language of computers so messages can be stored and retrieved and even distributed to many people at once. IBM delivered its first such systems last February, Wang has announced its own version, and ECS Telecommunications of Dallas, a new company that had $5 million in revenues last year, has produced some 30,000 voice "mailboxes."

Voice mail shines because of the pesky phenomenon called "telephone tag," which forces the average business caller to try four times before he reaches the party he wants. With an ECS system, the caller often doesn't try to get his party on the phone at all. Instead he deposits a voice message after dialing a special exchange and punching a few buttons on his telephone. The recipient picks up the message in a similar fashion. American Express,

continued

"God help the user who tries to link disparate equipment."

which calculates that voice mail pays for itself if every manager uses it just once a day, also puts the day's top news and business stories in its mailboxes; Hoffmann-La Roche leaves mailbox messages for salesmen working in the field. When the drummer knows there may be an easily accessible voice message waiting for him, he can't plead isolation or missed instructions, so sales productivity rises.

Electronic mail and voice mail excite planners because they are ways to establish office-automation beachheads. Both services, though, will run into snags as vendors try to parlay them into more complex work stations. Voice mail is now transmitted by the common telephone. Though AT&T, Northern Telecom, and Mitel have demonstrated electronic boxes that include a telephone, a video screen, and a keyboard, it's unlikely that customers who really want to buy just voice-mail service will plunk down the $1,400 to $2,000 such fancier gear costs.

A frightening Tower of Babel

Electronic mail requires putting a terminal on each desk, and that's certainly a start toward more elaborate work stations. But as customers try to do more with electronic-mail stations, perhaps using them to pull data out of their company's electronic files or to look at what a secretary has stored in her word processor, they'll run up against a communications problem that is seriously impeding the growth of office automation. Not all terminals have been designed to tap into big corporate computers; almost none can talk easily with work stations of another brand, nor can they always do so with other models of the same brand. "God help the user who tries to link up disparate equipment," warns Victor D. Poor, executive vice president for R&D at Datapoint.

The prospect of being saddled with an office-automation system that's a Tower of Babel frightens many corporate purchasers. To lull their fears, manufacturers are pushing "local area networks"—assemblages of cables and switches that will be used to interconnect work stations. Xerox claims its Ethernet system will be simple for other manufacturers to hook into. Wang pushes Wangnet, which, unlike Ethernet, can easily carry voice and video signals. Last month IBM disclosed details of its own system, unique in its design. "The local network is undoubtedly the hot issue of the 1980s," says Ed Gistaro of Datapoint, whose entry is Arcnet, which has been sold for more than 2,000 networks of Datapoint minicomputers. "You have to have one—or at least a credible way of hooking into somebody else's—to get any customer to listen to you."

Whose system prevails is important, for the winner's equipment will mesh with his network more easily than will gear from other manufacturers. Wang and Xerox have started a street fight, accusing each other of making false claims and trying to sucker users. This confusing scrap has made buyers slower to purchase networks, admits Liddle of Xerox. For example, R. Dennis Wayson, director of corporate information systems for Sun Co., says, "Networks will be very important to our system, but we're not sure how to go. We built a conduit in our new Dallas offices, but we can't decide what kind of cable to pull through it."

The battle of the networks is especially puzzling to companies that make telephone switchboards, for they don't see any need for special conduits. Instead these companies envision networks of work stations that communicate through switchboards and the telephone wires that already snake through customers' buildings. "We've developed a digital switch that handles both telephones and work stations," says Janice Carnes, a marketing manager for Rolm Corp., one of the top three switchboard companies. "I just wish we had called it Rolmnet." Since the technology she's talking about is new and competing technologies are still developing, it isn't entirely clear which will be the cheaper for the office of the future. But switchboards seem to have a major advantage: even in advanced office systems, most traffic will consist of telephone conversations. Since

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There are market niches for any company that can fill a need.

these must be switched in any case, the cost of adding switching capacity for work stations is only incremental.

Given the muddled state of the office-automation market, picking winners is like picking horses: the best you can do is look at the racing form. On that basis IBM should take first place. Big Blue was slow to see the potential of office automation and still doesn't have a well-designed product line. It also made the mistake of selling office-automation products out of three different divisions, an arrangement that alienated customers already beset by hordes of salesmen. "Dealing with IBM was like dealing with three entirely different companies," says Jerrold J. Eisen, an office-systems consultant who has advised many large users.

But IBM is turning around now. It is reorganizing to streamline its product development and marketing efforts and has issued a rare "Statement of Direction" describing in detail what its office systems will look like in the future. That's impressed buyers, who have never before been clued in to IBM's intentions, and so has the fact that IBM's sales and service forces lurk everywhere. Eisen concludes, "We may not see the fruits of IBM's turnaround for another two or three years, but when we do, IBM will sweep the field."

The competitor to beat

Wang could be No. 2. Aside from IBM, it's the only company with a complete product line for the office, and it has what IBM lacks—standardized machines that enable operators trained on the smallest Wang system to use its largest one without being retrained. A negative for the company is that customers worry about its ability to service equipment in the field. Still, says Garrett of Paine Webber, "when you talk to the vendors, they see Wang as the competitor to beat."

After those two, it's a real horse race. Third place may be a photo finish between Digital Equipment and Xerox, both of which are rushing to overcome slow starts. Digital's first word-processing systems were so hard to use that formerly loyal customers booted them out. Now the company has made a comeback with office systems that flaunt powerful electronic-mail capabilities and allow the user to train himself with step-by-step programs that show up on the screen. Xerox, which once made word processors so ornery that they caused secretaries to collapse in tears, has bet over $100 million of development expense on Star and related products. Some buyers are hesitating because they have seen Xerox launch products before that do not communicate well with each other and suspect that could happen again.

Several minicomputer, word-processor, and even switchboard companies will get pieces of the work-station business. Few, however, are apt to win master contracts from large corporate customers: the big spenders like to limit the number of vendors to two or three, and the front-runners should preempt that business. Yet there still are enough profitable niches in the market to reward any company that can fill a particular customer need.

The results won't be in for years. Word processors, the most straightforward components of the office of the future, should keep on booming. Switchboards that handle voice and data communications simultaneously ought to take off next year, when they become more widely available. But the more complex products, such as professional work stations and intelligent copiers, won't come into their own for some time. By 1985, for example, only about 6% of managers and professionals are likely to be using sophisticated work stations.

Despite the universal desire of businessmen to find better ways of doing work, office automation remains poorly understood. "Users can't articulate what they want, and suppliers aren't that good at figuring it out," says Patricia Seybold, the reviewer of office systems. "It's the blind leading the blind." So office automation will not arrive as a revolution, but gradually, as vendors and users educate each other. The journey to the promised land may not take 40 years, but it's apt to remain painfully slow. ■

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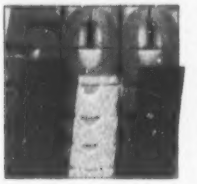


THE FORTUNE DIRECTORY OF THE LARGEST U.S. INDUSTRIAL CORPORATIONS

The 500

For the first time in the FORTUNE 500's 28-year history, General Electric slipped from the ranks of the top ten in 1981. From 1958 to 1972 GE was No. 4—behind only General Motors, Ford, and Exxon, known then as Standard Oil (New Jersey). Though GE's revenues (and profits) have grown smartly, the sales of oil companies rose much faster. No. 10 on last year's list, GE is now No. 11, overtaken by Atlantic Richfield, which has been moving steadily up—from No. 26—since the oil crisis of 1973. GE's departure from the top ten marks the first change in that select group since 1979, when Chrysler was replaced as No. 10 by Standard Oil (Indiana). Seven of the top ten are now oil companies.

Another departure of note is that of the longest-reigning boss of a 500 company: Henry H. Reichhold is stepping down at 80 as chief executive of Reichhold Chemicals (No. 320). Brief reports on this and other noteworthy aspects of the 500 appear on the pages following the directory.

In a year marred by inflation, recession, and the emergence of an oil glut, Exxon kept a firm grip on the No. 1 slot with sales of $108 billion—a scant increase of 4.8% over 1980. Total sales of the 500 went up 7.5%, to $1.8 trillion, not quite keeping up with inflation. The consumer price index—the deflator the Financial Accounting Standards Board recommends—rose 8.9%, meaning that in real terms the 500's sales declined 1.4%.

The greatest sales increase among the 500 resulted, of course, from a merger. The champion gainer was Nabisco, not Du Pont, whose gobbling up of Conoco was 1981's biggest deal. Although Du Pont's sales vaulted 67.1%, the company moved up just three places, to No. 12—in part because the acquisition was not final until September 30, so that Du Pont could consolidate only three months of Conoco's figures. Nabisco boosted its sales 126.5% by merging with Standard Brands, No. 128 last year, to become Nabisco Brands. It climbed 92 places in sales rank, from No. 152 to No. 60.

Not every big sales gain can be traced to a merger. Geosource, a Houston-based manufacturer of oil exploration and production equipment, increased its sales by $289 million, or 65.6%, entering the 500 as No. 381. But the huge growth of the exploration-services side of Geosource's business may eventually take the company out of the ranks of industrial corporations. (To meet FORTUNE's definition of an industrial, a company must derive more than 50% of its revenues from manufacturing or mining and publish its financial results. For detailed definitions, see the directory notes, page 280.)

Where's the profit?

Profits, which totaled $84 billion for the 500, were up 3.7% from the 1980 figure. But after adjustment for inflation, profits were *down* 5.2%—still a considerable improvement over 1980. An inflation rate of 13.5% pulled real profits that year into a decline of almost 10%.

Exxon was No. 1 in profits as well as sales. Its net income of $5.6 billion—though down 1.5%, or $83 million, from 1980—was greater than the *sales* of 437 of the 500. Sixteen companies had profits of $1 billion or more—up one from the previous year. One oddity: the $1.5 billion in profits that Joseph E. Seagram & Sons (No. 238) reported was slightly more than its sales (see page 290).

Only Ford, No. 6, lost as much as $1 billion last year, but 30 other companies also reported losses. Two of the money losers were oil refiners. Commonwealth Oil (No. 314), long a familiar name on the losers' list because its 141,000-barrel-a-day refinery in Puerto Rico is dependent on high-priced OPEC oil, emerged from three years of bankruptcy in 1981—and lost another $212 million. Cities Service (No. 39) dropped $49 million, thanks to a onetime charge against earnings from dumping an unprofitable plastics operation.

Negative figures appear as stockholders' equity for two companies—Chrysler (No. 26) and Rath Packing (No. 491). In restructuring itself, Chrysler has issued $1 billion of redeemable preferred stock to lenders in exchange for debt; FORTUNE, following the SEC's lead, does not include certain types of redeemable preferred stock in equity because the capital must be paid back. Rath's negative stockholders' equity has a different source: red ink. Accumulated deficits have eaten up the company's capital, and stockholders' equity stands at minus $5.2 million.

The 500's median return on sales dropped from 1980's 4.8% to 4.6%; the best year ever in this respect was 1966, when the 500 attained a 5.6% return on sales. Median return on stockholders' equity was also down—from 14.4% to 13.8%—though Titanium Metals Corp. (No. 469) managed, partly by legerdemain, to produce a return of 91% for its lucky stockholders—all two of them (see page 294).

Stocks of the 500 did just about what one would expect in a languishing economy. An investor who bought stock in the 500's median performer—it happens to be Pennzoil (No. 159)—on December 31, 1980, and cashed it in precisely one year later would have had a minus total return (dividend yield plus stock-price appreciation) of .35%. The all-industry median was pulled down by those stars of yesteryear, the oil stocks; the median total returns of the petroleum refining and mining and crude-oil production industry groups fell almost 25%. Apparel stocks were a better investment; the median total return to investors in apparel companies last year was 37.7% (see page 296).

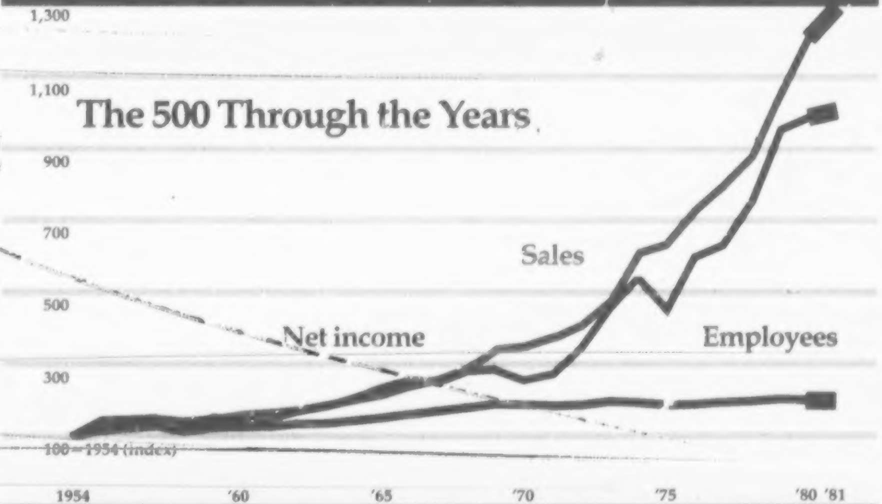
For the second year in a row the long-term investor in 500 stocks would have done fairly well. The annual average total return for ten years dropped from 1980's 9.4%, the highest since 1972, to a still respectable 8.52%. Some of the stocks were golden (see page 299).

A new directory

A record number of companies, 38, dropped out of the 500 last year. Twenty vanished because they were merged or acquired; that was only one less than went off the list for all reasons the year before. Six companies in broadcasting and motion-picture production—American Broadcasting, Columbia Pictures, CBS, Metromedia, MCA, and Twentieth Century-Fox—left the 500 and will jostle for places in a new directory of the largest diversified-service corporations that FORTUNE will publish in the July 12 issue.

Among the 11 companies returning to the 500 after absences of varying lengths—absences most often due to sales sagging below the cutoff—is one that has been gone 14 years. Engelhard, a metallurgy and chemical company then known as Engelhard Industries, last appeared in 1966. It turned ineligible for the list when it acquired a commodities-trading company and became predominantly a wholesaler, Engelhard Minerals & Chemicals. Last year that company divided itself into Phibro Corp., which took over Salomon Brothers in October, and Engelhard, which got the manufacturing operations. Engelhard has done nicely in its years off the list. No. 271 in 1966, it is now No. 180. —MONCI JO WILLIAMS

Performance of the 500	1981	1980
Sales (billions)	$1,773.4	$1,650.2
Change in sales	7.5%	14.2%
Profits (billions)	$84.2	$81.2
Change in profits	3.7%	3.6%
Assets (billions)	$1,282.8	$1,175.5
Number of sales increases	413	415
Number of profit increases	302	292
Number of money losers	31	24
Median return on sales	4.6%	4.8%
Median return on equity	13.8%	14.4%
Median total return for the year	-.35%	21.05%
Number of employees (millions)	15.6	15.9



The 500 Through the Years

The figures are impressive, but all was not 100% in the land of the 500 last year. Sales growth eased (and did not keep up with inflation). Profits increased more slowly than sales. The number of employees slipped to 15.6 million. The decline in jobs helped account for at least one other increase: average sales per employee, a measure of productivity, climbed $9,694 from the previous year to $113,424.

THE 500 LARGEST INDUSTRIAL CORPORATIONS (ranked by sales)

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
1	1	**Exxon** (New York)	108,107,688	62,931,055	1	5,567,481	1	28,516,916	1
2	2	**Mobil** (New York)	64,488,000	34,776,000	3	2,433,000	3	14,657,000	4
3	3	**General Motors** (Detroit)	62,698,500	38,991,200	2	333,400	57	17,721,100	3
4	4	**Texaco** (Harrison, N.Y.)	57,628,000	27,489,000	5	2,310,000	5	13,752,000	5
5	5	**Standard Oil of California** (San Francisco)	44,224,000	23,680,000	7	2,380,000	4	12,703,000	6
6	6	**Ford Motor** (Dearborn, Mich.)	38,247,100	23,021,400	8	(1,060,100)	490	7,362,200	13
7	9	**Standard Oil (Indiana)** (Chicago)	29,947,000	22,916,000	9	1,922,000	7	10,665,000	7
8	8	**International Business Machines** (Armonk, N.Y.)	29,070,000	29,586,000	4	3,308,000	2	18,161,000	2
9	7	**Gulf Oil** (Pittsburgh)	28,252,000*	20,429,000	11	1,231,000	14	9,984,000	9
10	11	**Atlantic Richfield** (Los Angeles)	27,797,436	19,732,539	13	1,671,290	9	8,665,221	12
11	10	**General Electric** (Fairfield, Conn.)	27,240,000	20,942,000	10	1,652,000	10	9,128,000	11
12	15	**E.I. du Pont de Nemours** (Wilmington, Del.)[1]	22,810,000	23,829,000	6	1,401,000	12	10,458,000	8
13	12	**Shell Oil** (Houston)	21,629,000	20,118,000	12	1,701,000	8	9,245,000	10
14	13	**International Telephone & Telegraph** (New York)	17,306,189	15,052,377	16	676,804	24	6,116,230	16
15	16	**Phillips Petroleum** (Bartlesville, Okla.)	15,966,000	11,264,000	20	879,000	17	5,481,000	18
16	17	**Tenneco** (Houston)[2]	15,462,000	16,808,000	14	813,000	19	5,045,000	20
17	18	**Sun** (Radnor, Pa.)	15,012,000	11,822,000	19	1,076,000	16	5,006,000	21
18	20	**Occidental Petroleum** (Los Angeles)[3]	14,707,543	8,074,543	28	722,216	22	2,864,120	38
19	19	**U.S. Steel** (Pittsburgh)	13,940,500	13,316,100	17	1,077,200	15	6,260,000	15
20	21	**United Technologies** (Hartford)	13,667,758	7,555,103	32	457,686	37	3,212,511	33
21	23	**Standard Oil (Ohio)** (Cleveland)[4]	13,457,091	15,743,296	15	1,946,898	6	5,963,042	17
22	22	**Western Electric** (New York)[5]	13,008,000	8,338,300	25	711,300	23	4,991,200	22
23	26	**Getty Oil** (Los Angeles)	12,887,360	9,536,356	22	856,865	18	4,773,529	24
24	25	**Dow Chemical** (Midland, Mich.)	11,873,000	12,496,000	18	564,000	31	4,891,000	23
25	24	**Procter & Gamble** (Cincinnati)[6]	11,416,000	6,961,000	35	593,000‡	29	3,863,000	27
26	32	**Chrysler** (Highland Park, Mich.)	10,821,600	6,270,000	38	(475,600)	489	(539,500)	498
27	28	**Union Oil of California** (Los Angeles)	10,745,900	7,592,800	31	791,400	20	4,114,200	25
28	29	**Eastman Kodak** (Rochester, N.Y.)	10,337,000	9,446,000	23	1,239,000	13	6,770,000	14
29	31	**Dart & Kraft** (Northbrook, Ill.)[7]	10,211,000	5,053,800	56	347,500	53	2,718,000	41
30	27	**Union Carbide** (Danbury, Conn.)	10,168,000	10,423,000	21	649,000	27	5,263,000	19
31	30	**Boeing** (Seattle)	9,788,200	6,953,700	36	473,000	35	2,655,200	43
32	35	**R.J. Reynolds Industries** (Winston-Salem, N.C.)	9,765,700*	8,096,000	27	767,800	21	3,929,500	26
33	43	**Amerada Hess** (New York)	9,396,219	6,321,581	37	212,591	92	2,490,839	47
34	34	**Westinghouse Electric** (Pittsburgh)	9,367,500	8,316,200	26	438,000	40	2,820,700	39
35	40	**Ashland Oil** (Russell, Ky.)[8,10]	9,262,076	4,097,433	68	90,032	204	971,802	157
36	39	**Marathon Oil** (Findlay, Ohio)	9,219,991*	5,993,623	41	343,059	55	2,062,520	59
37	33	**Caterpillar Tractor** (Peoria, Ill.)	9,154,500	7,284,900	33	578,900	30	3,856,800	28
38	36	**Goodyear Tire & Rubber** (Akron, Ohio)	9,152,905	5,354,259	50	260,295	73	2,375,433	50
39	44	**Cities Service** (Tulsa)	8,899,300	6,048,500	40	(49,200)	478	2,106,900	57
40	42	**LTV** (Dallas)	8,822,700¶	4,332,700	63	386,300	45	1,285,400	111
41	37	**Beatrice Foods** (Chicago)[11]	8,772,804	4,236,555	65	304,211	65	2,181,445	53
42	38	**Xerox** (Stamford, Conn.)	8,691,000	7,674,400	30	598,200	28	3,727,600	29
43	45	**Philip Morris** (New York)	8,306,600*	9,245,300	24	676,200	25	3,304,600	32
44	41	**RCA** (New York)	8,004,800	7,856,700	29	54,000	274	1,687,900	73
45	53	**McDonnell Douglas** (St. Louis)	7,384,900	4,364,200	62	176,600	109	1,653,500	77
46	49	**International Harvester** (Chicago)[12]	7,327,165	5,346,122	51	(393,128)	487	1,284,994	112
47	47	**Bethlehem Steel** (Bethlehem, Pa.)	7,298,000	5,282,100	53	210,900	95	2,763,200	40
48	46	**Rockwell International** (Pittsburgh)[9]	7,039,700	4,809,000	59	291,800	68	1,939,700	62
49	54	**PepsiCo** (Purchase, N.Y.)	7,027,443	4,057,061	69	333,456	56	1,640,304	78
50	48	**Monsanto** (St. Louis)	6,947,700	6,069,200	39	445,100	39	3,330,200	31

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 280.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

*Does not include excise taxes; see the explanation of "sales" on page 280.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

[1] Figures include Conoco (1980 rank: 14), acquired September 30, 1981.

[2] Figures include Houston Oil & Minerals (1980 rank: 541), acquired April 24, 1981.

[3] Figures include Iowa Beef Processors (1980 rank: 81), acquired August 12, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
180,000†	8	5.1	198	19.5	84	6.44	6.50	1.69	14.31	191	(15.04)	347	12.11	143	29
206,400	6	3.8	307	16.6	158	5.72	7.70**	1.33	15.71	166	(35.30)	439	12.18	142	29
741,000†	1	0.5	453	1.9	453	1.07	(2.65)	6.72	(16.79)	411	(9.11)	296	0.71	384	40
66,728	49	4.0	290	16.8	153	8.75	9.79**	3.32	10.18	282	(25.42)	401	6.81	269	29
43,281	101	5.4	181	18.7	96	6.96	7.02	1.51	16.51	151	(9.40)	297	17.60	65	29
404,788†	2	—		—		(8.81)	(12.83)	4.94	—		(10.25)	303	(4.47)	427	40
58,665	64	6.4	123	18.0	115	6.56	6.54	1.24	18.13	130	(31.64)	423	15.94	84	29
354,936	4	11.4	27	18.2	109	5.63	6.10	1.88	11.59	249	(11.14)	309	1.88	369	44
58,500	65	4.4	265	12.3	295	6.37	7.21	2.70	8.96	301	(12.59)	324	9.09	214	29
54,200	75	6.0	146	19.3	90	6.66	6.64	0.88	22.43	74	(22.87)	390	13.44	120	29
404,000†	3	6.1	142	18.1	114	7.26	6.65	2.60	10.81	265	(1.26)	244	3.09	350	36
177,235	9	6.1	136	13.4	257	7.55	4.83	2.44	11.96	239	(4.77)	269	2.40	361	28
37,273	119	7.9	81	18.4	103	5.51	4.99	0.91	19.73	105	(21.37)	381	18.93	53	29
324,000	5	3.9	295	11.1	334	4.58	6.12	2.85‡	4.86	361	7.82	181	(0.34)	400	36
34,500	129	5.5	173	16.0	175	5.78	7.01	0.89	20.57	93	(27.32)	407	13.74	115	29
103,200	21	5.3	189	16.1	171	6.01	5.95	2.28	10.18	281	(30.07)	416	8.91	219	29
45,062	95	7.2	98	21.5	47	8.85	5.92	1.32	20.96	88	(2.52)	255	12.80	135	29
47,804	91	4.9	222	25.2	24	7.77	8.82	(1.61)‡	—		(23.90)	393	12.02	146	10
141,623†	12	7.7	86	17.2	140	12.07	5.77	1.90	20.3[illegible]	96	28.78	72	10.31	185	33
190,000	7	3.3	334	14.2	228	7.71	7.28	(1.81)	—		(28.24)	411	16.36	80	41
56,672	68	14.5	12	32.6	8	7.92	7.37	0.50	31.82	35	(39.24)	451	17.70	64	29
168,000†	10	5.5	176	14.3	227	N.A.	N.A.	N.A.	—		—		—		36
19,128	220	6.6	118	18.0	118	10.42	10.60	1.70	19.88	103	(27.16)	406	13.96	111	29
63,800	55	4.8	232	11.5	316	3.00	4.42	0.85	13.44	210	(12.69)	325	6.44	275	28
60,000	61	5.2	194	15.4	199	7.17‡	7.78	2.91	9.44	295	22.36	109	3.31	347	43
87,825†	29	—		—		(7.18)	(26.00)	1.67	—		(30.81)	419	(15.24)	454	40
19,399	217	7.4	94	19.2	91	4.56	3.73	0.80	19.01	115	(13.78)	337	20.17	44	29
136,400	14	12.0	22	18.3	107	7.66	7.15	2.60	11.41	255	6.99	188	0.08	393	38
88,490	28	3.4	329	12.8	283	6.36	7.03	3.21[8]	7.08	332	24.48	99	6.28	278	20
110,255	19	6.4	125	12.3	294	9.56	13.36	2.61	13.86	196	8.80	173	7.87	243	28
105,300†	20	4.8	228	17.8	122	4.90	6.23	0.43**	27.55	46	(45.84)	460	22.68	24	41
85,776	30	7.9	82	19.5	83	7.08	6.23	2.55	10.75	268	8.77	175	10.60	178	21
9,025†	361	2.3	405	8.5	391	2.53	6.44	1.52	5.23	355	(42.48)	456	5.61	288	29
147,841†	11	4.7	239	15.5	193	5.10	4.71	2.08	9.38	297	(7.85)	285	(0.41)	401	36
34,400	130	1.0	444	9.3	379	2.22	6.80	0.51‡	15.85	161	(17.17)	354	13.23	127	29
16,168	250	3.7	309	16.6	157	5.82	6.27	1.14‡	17.71	134	20.49	116	21.67	29	29
83,455†	34	6.3	131	15.0	206	6.64	6.53	1.50	16.04	158	(0.18)	234	9.13	211	45
137,982†	13	2.8	369	11.0	338	3.59	3.18**	2.34	4.37	369	26.87	79	1.28	375	30
20,200	209	—		—		(0.60)	5.73	1.22	—		(0.32)	235	17.83	62	29
53,000	77	4.4	263	30.1	12	7.97	3.95	(9.28)‡	—		(16.59)	352	4.62	309	33
80,000	36	3.5	324	13.9	240	2.94	2.61	1.11	10.23	279	0.66	226	2.54	358	20
120,981	16	6.9	107	16.0	174	7.08	7.33	2.71	10.08	285	(27.44)	408	(8.10)	442	38
72,000	43	8.1	71	20.5	62	5.41	4.63	1.01	18.27	126	17.11	138	13.29	125	21
119,000	18	0.7	450	3.2	450	(0.19)	3.35	(2.16)‡	—		(31.76)	425	(1.42)	406	36
74,264	41	2.4	397	10.7	349	4.44	3.66	2.10	7.77	321	(37.68)	447	3.46	344	41
65,640	51	—		—		(12.90)	(12.91)	1.65	—		(71.03)	469	(7.98)	441	40
83,800†	32	2.9	366	7.6	403	4.83	2.77	3.14	4.40	367	(5.77)	273	4.05	329	33
103,000	22	4.1	283	15.0	205	3.84	3.77	1.05	13.65	199	(23.93)	394	14.73	99	41
120,000	17	4.7	233	20.3	66	3.61	3.01	0.91	14.77	185	38.70	44	7.66	248	49
57,391	66	6.4	124	13.4	260	11.50	4.10	2.65	15.81	163	7.65	183	8.58	228	28

[4] Figures include Kennecott (1980 rank: 169), acquired June 4, 1981.

[5] Wholly owned by American Telephone & Telegraph.

[6] Figures are for fiscal year ending June 30, 1981.

[7] Figures include Hobart (1980 rank: 402), acquired April 29, 1981.

[8] Figure is for Kraft.

[9] Figures are for fiscal year ending September 30, 1981.

[10] Figures include U.S. Filter (1980 rank: 334), acquired March 31, 1981.

[11] Figures are for fiscal year ending February 28, 1981.

[12] Figures are for fiscal year ending October 31, 1981.

THE 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
51	58	**Armco** (Middletown, Ohio)	6,906,000	4,817,200	58	294,500	67	2,467,200	48
52	55	**General Foods** (White Plains, N.Y.)[13]	6,601,255	3,129,842	92	255,366	75	1,610,332	80
53	51	**W.R. Grace** (New York)	6,520,800	5,021,500	57	361,300	50	2,061,000	60
54	52	**Minnesota Mining & Manufacturing** (St. Paul)	6,508,000	5,422,000	46	673,000	26	3,449,000	30
55	59	**Allied** (Morristown, N.J.)[14,15]	6,407,000	5,344,000	52	348,000	52	1,900,000	66
56	75	**Union Pacific** (New York)	6,374,682	7,096,971	34	410,710	43	3,097,241	37
57	61	**Lockheed** (Burbank, Calif.)	6,232,700¶	2,104,800	156	(288,800)**	486	105,200	467
58	56	**Coca-Cola** (Atlanta)	6,129,251	3,564,781	77	481,782	34	2,270,772	52
59	66	**Coastal** (Houston)	5,909,702	3,182,916	91	(96,399)	482	477,066	255
60	152	**Nabisco Brands** (New York)[16]	5,819,200	3,429,200	81	266,300	72	1,522,800	86
61	57	**Gulf & Western Industries** (New York)[18]	5,702,476	5,893,224	42	290,887	69	2,179,038	55
62	69	**Raytheon** (Lexington, Mass.)	5,636,184	3,363,759	85	324,041	58	1,536,013	84
63	62	**Consolidated Foods** (Chicago)[6]	5,614,052	2,276,557	145	140,278	137	883,774	171
64	80	**Farmland Industries** (Kansas City, Mo.)[19]	5,503,323	2,217,410	147	N.A.[23]		547,049	232
65	60	**Deere** (Moline, Ill.)[18]	5,446,720	5,683,877	44	250,994	77	2,449,586	49
66	77	**Sperry** (New York)[13]	5,427,178	5,242,521	54	312,998	61	2,336,629	51
67	66	**Georgia-Pacific** (Portland, Ore.)	5,414,000	5,060,000	55	160,000	123	1,926,000	63
68	74	**Johnson & Johnson** (New Brunswick,. N.J.)	5,399,000	3,820,400	72	467,600	36	2,527,900	46
69	71	**Honeywell** (Minneapolis)	5,351,200	4,330,800	64	259,300	74	2,098,000	56
70	85	**Signal Companies** (La Jolla, Calif.)[20]	5,342,600	3,678,600	75	214,000	91	1,658,200	75
71	70	**TRW** (Cleveland)	5,285,133	3,126,603	93	228,830	82	1,417,646	95
72	64	**Colgate-Palmolive** (New York)	5,261,364	2,630,827	120	208,399	96	1,297,925	106
73	72	**Ralston Purina** (St. Louis)[9]	5,233,800	2,218,500	146	174,800	113	1,229,600	120
74	65	**Continental Group** (Stamford, Conn.)	5,194,400	4,170,500	66	242,200	79	1,572,600	82
75	84	**Charter** (Jacksonville, Fla.)	5,064,726	1,541,326	196	7,717	448	653,871	205
76	79	**General Dynamics** (St. Louis)	5,063,400	2,326,800	137	124,100	154	1,071,500	138
77	67	**International Paper** (New York)	4,983,400	5,544,300	46	525,000	32	3,197,400	34
78	63	**Aluminum Co. of America** (Pittsburgh)	4,977,500	5,653,800	45	296,200	66	3,136,700	35
79	88	**Litton Industries** (Beverly Hills, Calif.)[19]	4,942,835	3,687,606	74	311,566	63	1,422,581	93
80	89	**General Mills** (Minneapolis)[21]	4,852,400	2,301,300	140	196,600	102	1,145,400	132
81	76	**American Can** (Greenwich, Conn.)	4,836,400	2,835,800	108	76,700	229	1,041,700	142
82	78	**Greyhound** (Phoenix)	4,699,085	1,950,179	166	138,187	139	942,128	164
83	93	**Dresser Industries** (Dallas)[12]	4,614,500	3,273,300	89	316,600	59	1,924,600	64
84	83	**Weyerhaeuser** (Tacoma, Wash.)	4,501,512	5,716,490	43	228,344	83	3,107,865	36
85	82	**Borden** (New York)	4,415,174	2,508,816	126	159,939	124	1,318,755	102
86	87	**Bendix** (Southfield, Mich.)[9]	4,393,100	3,218,500	90	452,800	38	1,466,900	90
87	98	**Republic Steel** (Cleveland)	4,382,073	3,342,364	86	190,089	104	1,661,046	74
88	73	**Firestone Tire & Rubber** (Akron, Ohio)[13]	4,361,000	3,018,000	96	135,000	142	1,443,000	92
89	91	**CPC International** (Englewood Cliffs, N.J.)	4,343,100	2,462,000	129	218,400	89	1,235,100	117
90	●	**BATUS** (Louisville, Ky.)[22]	4,245,472	2,929,860	102	179,698	106	948,073	162
91	92	**Texas Instruments** (Dallas)	4,206,000	2,310,500	139	108,500	173	1,260,100	115
92	90	**IC Industries** (Chicago)	4,194,500	3,741,500	73	134,400	144	1,232,800	119
93	96	**American Home Products** (New York)	4,131,237	2,588,538	123	497,332	33	1,654,472	76
94	100	**National Steel** (Pittsburgh)	4,062,291	3,443,893	79	86,084	209	1,492,197	89
95	97	**United Brands** (New York)[6]	4,058,387	1,309,428	212	29,386	353	579,479	218
96	86	**American Brands** (New York)	4,039,096*	4,133,024	67	386,127	46	1,899,729	67
97	99	**Champion International** (Stamford, Conn.)	4,004,027	3,443,226	80	101,369	183	1,753,444	70
98	95	**Owens-Illinois** (Toledo)	3,943,300	3,072,200	94	154,100	126	1,422,000	94
99	110	**Anheuser-Busch** (St. Louis)	3,847,200*	2,875,200	106	217,400	90	1,206,800	125
100	147	**Agway** (Dewitt, N.Y.)[6, 24]	3,828,262	1,335,801	209	N.A.[23]		283,826	346

●Not among the 500 or the Second 500 in 1980.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

N.A. Not available.

*Does not include excise taxes; see the explanation of "sales" on page 280.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

[13] Figures are for fiscal year ending March 31, 1981.

[14] Name changed from Allied Chemical April 27, 1981.

[15] Figures include Bunker Ramo (1980 rank: 486), acquired July 1, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
67,660	47	4.3	275	11.9	305	4.97	4.73	0.96	17.67	132	(21.78)	383	13.93	112	33
53,000	76	3.9	300	15.9	181	5.14	5.12	2.38	8.00	318	12.23	160	4.59	313	20
88,800	27	5.5	168	17.5	128	7.58	6.08	1.60**	16.83	143	(18.29)	363	11.02	168	28
91,400	26	10.3	38	19.5	85	5.74	5.78	1.88	11.81	245	(2.54)	256	0.99	381	38
56,671	69	5.4	177	16.3	106	9.17	8.15	2.01	18.39	153	(13.60)	336	9.05	215	28
32,000	140	6.4	122	13.3	264	4.27	4.22	0.28‡	31.32	39	(31.94)	426	16.46	79	29
71,300	44	—		—		(18.03)**	1.53	1.36**	—		39.55	42	16.97	75	41
38,100	116	7.9	63	21.2	51	3.90	3.42	1.41	10.71	269	11.07	165	(1.75)	411	49
7,215	400	—		—		(4.88)	4.63	1.90	—		(22.65)	369	(0.14)	396	29
60,400	60	4.6	248	17.5	130	4.21	3.81[17]	1.59[17]	10.23	280	28.46	73	7.19	261	20
122,000†	15	5.1	202	13.3	261	3.75	4.38	0.77	17.15	139	4.72	204	10.87	171	34
76,500	39	5.7	159	21.1	52	3.86	3.40	0.61	20.26	97	(29.86)	415	16.89	76	36
85,000	31	2.5	387	15.9	180	4.67	4.12	2.22	7.72	323	39.18	43	2.96	351	49
10,300	336	—		—		N.A.	N.A.	N.A.	—		—		—		29
60,900	58	4.6	244	10.2	359	3.79	3.72	1.07	13.48	207	(21.98)	387	14.80	97	45
92,476	24	5.8	157	13.4	258	7.68	7.60	2.11	13.79	200	(41.48)	455	3.94	333	44
44,000	100	3.0	380	8.3	395	1.51	2.34	0.94	4.85	362	(14.71)	345	2.80	353	26
77,100	37	8.7	66	18.5	102	2.51	2.17	0.61	15.20	176	14.22	151	2.77	354	42
96,923	23	4.8	226	12.4	292	11.38	13.13	3.90	11.30	257	(34.61)	437	(3.11)	421	44
59,700	62	4.0	291	12.9	277	2.95	2.89	0.39	22.43	75	(13.54)	333	20.96	35	40
91,941	25	4.3	269	16.1	169	6.60	6.39	1.92	13.14	215	(5.82)	274	11.10	166	40
46,700†	95	4.0	293	16.1	173	2.55	2.12	1.03	9.49	294	22.32	110	2.75	356	43
63,000	56	3.3	335	14.2	229	1.62	1.51	0.50	12.47	229	21.13	113	3.55	340	20
54,600†	74	4.7	240	15.4	196	6.61	6.11	2.51	10.17	283	8.06	179	7.04	264	34
9,144	359	0.2	458	1.2	455	0.06	1.59	0.65**	(21.20)	414	(53.20)	465	5.75	287	29
81,000	35	2.5	392	11.6	313	2.25	3.58	0.42	18.28	125	(41.00)	454	19.62	47	41
36,000	122	10.5	34	16.4	162	10.08	5.97	1.22‡	23.51	67	(1.13)	242	5.77	286	26
44,400†	99	6.0	150	9.4	376	3.97	6.54	0.82	17.08	142	(8.01)	286	10.17	186	33
76,700	38	6.3	132	21.9	40	7.76	7.27	1.03	22.38	76	(33.84)	433	12.96	132	36
71,200	45	4.1	267	17.2	142	3.90	3.37	0.99	14.69	187	38.65	45	8.88	221	20
46,800†	93	1.6	422	7.4	406	3.77	4.26	2.66	3.55	373	22.72	106	7.90	241	34
50,245†	83	2.9	361	14.7	214	3.06	2.67	1.76	5.69	351	20.35	118	4.77	306	20
57,000	67	6.9	111	16.5	160	4.04	3.35	0.57	21.63	86	(36.58)	443	17.22	70	45
42,812	102	5.1	204	7.3	407	1.62	2.12‡	0.82	7.05	334	(11.21)	310	5.10	299	26
35,200†	125	3.6	315	12.1	302	5.45	4.79	2.00	10.54	271	16.55	143	5.94	283	20
69,600	46	10.3	39	30.9	9	18.49	7.68	1.92	25.42	57	3.39	212	12.44	140	40
40,891†	110	4.3	268	11.4	318	11.75	3.15	0.09	62.77	5	13.23	155	9.93	193	33
73,000	42	3.1	349	9.4	378	2.33	(1.84)**	2.07	1.19	386	25.95	84	(1.59)	409	30
38,000	117	5.0	213	17.7	124	4.57	4.14	1.09	15.41	171	18.62	126	14.19	106	20
44,555†	98	4.2	278	19.0	94	N.A.	N.A.	N.A.	—		—		—		21
83,714	33	2.6	379	8.6	390	4.62	9.22	1.53	11.69	247	(31.68)	424	4.03	330	36
55,620	72	3.2	343	10.9	340	6.65	6.02	3.16‡	45.17	13	20.17	119	6.33	277	20
49,267	85	12.0	21	30.1	11	3.18	2.84	1.01	12.15	235	36.54	49	5.79	285	42
32,976†	136	2.1	409	5.8	428	4.59	4.42	2.61	5.81	349	00.00	230	0.88	382	33
51,000	81	0.7	447	5.1	433	2.42	2.54	(2.43)‡	—		(25.41)	400	1.90	368	20
52,496	80	9.6	48	20.3	67	6.68	7.01	2.15	12.00	238	3.13	213	13.36	123	21
40,000	112	2.5	384	5.8	427	1.58	2.63	1.23	2.54	376	(13.35)	331	1.19	378	26
50,954	82	3.9	296	10.8	343	5.15	5.09	1.81	11.02	262	22.30	111	7.26	258	32
18,043	224	5.7	164	18.0	116	4.79	3.80	1.60	11.59	250	52.24	22	(0.32)	399	49
17,883	228	—		—		N.A.	N.A.	N.A.	—		—		—		29

[16] Name changed from Nabisco (1980 rank: 152) upon merger with Standard Brands (1980 rank: 128), July 6, 1981.

[17] Figures are for Nabisco.

[18] Figures are for fiscal year ending July 31, 1981.

[19] Figures are for fiscal year ending August 31, 1981.

[20] Figures include Ampex (1980 rank: 493), acquired January 15, 1981.

[21] Figures are for fiscal year ending May 31, 1981.

[22] Wholly owned by BAT Industries Ltd.

[23] Cooperatives provide only "net margin" figures, which are not comparable with the net-income figures in these listings.

[24] Figures include H.P. Hood (1980 rank: 452), acquired July 16, 1980.

THE 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
101	105	**Kerr-McGee** (Oklahoma City)	3,826,420	3,414,904	82	211,117	94	1,501,224	87
102	118	**Combustion Engineering** (Stamford, Conn.)	3,809,743	2,666,326	119	147,300	134	732,510	192
103	112	**Inland Steel** (Chicago)	3,754,941	2,891,055	104	57,255	266	1,309,171	104
104	107	**Celanese** (New York)	3,752,000	2,991,000	99	144,000	136	1,233,000	118
105	136	**Northwest Industries** (Chicago)	3,680,200¶	2,489,800	127	419,300	41	1,021,100	147
106	106	**American Cyanamid** (Wayne, N.J.)	3,649,073	3,065,025	95	197,054	101	1,528,565	85
107	139	**Archer-Daniels-Midland** (Decatur, Ill.)[6]	3,647,491	2,000,631	161	175,981	110	1,046,994	140
108	111	**McDermott** (New Orleans)[13]	3,599,643	3,899,980	70	106,697	175	1,044,847	141
109	103	**FMC** (Chicago)	3,581,960	2,738,862	115	139,526	138	1,297,886	107
110	120	**Hewlett-Packard** (Palo Alto, Calif.)[12]	3,578,000	2,758,000	112	312,000	62	1,920,000	65
111	133	**H.J. Heinz** (Pittsburgh)[25]	3,568,889	2,073,704	158	167,454	121	986,565	154
112	119	**Diamond Shamrock** (Dallas)	3,563,787	3,016,385	97	121,265	155	1,349,735	99
113	117	**Bristol-Myers** (New York)	3,496,700	2,488,500	128	305,800	64	1,564,500	83
114	101	**Reynolds Metals** (Richmond, Va.)	3,481,100	3,299,500	88	86,700	208	1,363,400	98
115	109	**Land O'Lakes** (Arden Hills, Minn.)	3,470,179	692,292	320	N.A.[23]		219,852	385
116	108	**NCR** (Dayton, Ohio)	3,432,701	3,386,534	84	208,234	97	1,853,351	69
117	161	**Tosco** (Los Angeles)	3,431,491	1,066,081	248	22,579	395	258,592	359
118	124	**Emerson Electric** (St. Louis)[9]	3,429,261	2,201,680	149	273,273	71	1,386,382	96
119	104	**Warner-Lambert** (Morris Plains, N.J.)	3,379,952	2,953,101	100	9,222	443	1,385,479	97
120	129	**Ingersoll-Rand** (Woodcliff Lake, N.J.)	3,377,564	2,678,075	117	193,338	103	1,283,158	114
121	113	**Carnation** (Los Angeles)	3,354,141	1,645,362	184	172,277	116	1,014,725	150
122	116	**PPG Industries** (Pittsburgh)	3,353,600	2,954,700	101	211,200	93	1,628,400	79
123	187	**Penn Central** (New York)[20]	3,348,800	3,394,900	83	168,700	120	1,309,300	103
124	102	**Textron** (Providence)	3,341,800	2,195,700	150	151,800	128	1,227,000	121
125	135	**Time Inc.** (New York)	3,337,406	2,754,759	113	148,821	133	1,222,718	123
126	121	**Motorola** (Schaumburg, Ill.)	3,335,900	2,399,399	133	174,990	111	1,288,012	108
127	50	**Esmark** (Chicago)[12]	3,319,809	1,743,316	180	93,769	198	609,871	211
128	137	**Burroughs** (Detroit)[27]	3,318,491	4,439,400	61	148,926	132	2,180,076	54
129	125	**Pillsbury** (Minneapolis)[22]	3,301,700	2,174,500	154	119,600	157	752,400	188
130	149	**Martin Marietta** (Bethesda, Md.)	3,294,087	2,545,870	125	200,072	100	1,199,977	126
131	148	**North American Philips** (New York)	3,273,753	1,854,088	173	103,974	179	732,194	193
132	134	**Burlington Industries** (Greensboro, N.C.)[9]	3,262,886	2,210,738	148	115,314	160	1,177,676	127
133	126	**Pfizer** (New York)	3,249,700	3,647,100	76	221,300	87	1,697,600	72
134	132	**Teledyne** (Los Angeles)	3,237,600	2,868,200	107	412,300	42	1,706,500	71
135	183	**Warner Communications** (New York)	3,237,153	2,673,641	118	226,493	84	1,150,735	130
136	114	**Kaiser Aluminum & Chemical** (Oakland, Calif.)	3,225,500	3,835,900	71	132,900	147	1,497,400	88
137	162	**Digital Equipment** (Maynard, Mass.)[6]	3,198,099	3,456,072	78	343,297	54	2,679,689	42
138	122	**B.F. Goodrich** (Akron, Ohio)	3,184,600	2,702,900	116	109,500**	170	1,091,600	135
139	115	**Eaton** (Cleveland)	3,165,319	2,332,857	136	82,368	217	1,015,524	149
140	123	**Crown Zellerbach** (San Francisco)	3,148,300	2,614,100	121	75,300	234	1,222,200	124
141	130	**Norton Simon** (New York)[6]	3,144,176	2,382,485	134	103,655	181	912,219	168
142	197	**Cooper Industries** (Houston)[20]	3,135,120	2,189,431	153	284,545	70	1,284,899	113
143	127	**Boise Cascade** (Boise, Idaho)	3,107,360	2,740,125	114	120,080	156	1,342,670	100
144	141	**Control Data** (Minneapolis)	3,101,300	2,825,900	109	170,600	118	1,577,600	81
145	142	**Merck** (Rahway, N.J.)	2,929,455	3,310,000	87	398,265	44	2,001,460	61
146	144	**Mead** (Dayton, Ohio)	2,899,700	2,193,300	151	106,900	174	888,800	170
147	150	**Kimberly-Clark** (Neenah, Wis.)	2,885,700	2,413,800	132	204,700	99	1,324,700	101
148	138	**Levi Strauss** (San Francisco)[29]	2,851,245	1,604,674	188	172,298	115	949,055	161
149	156	**Kidde** (Clifton, N.J.)	2,849,170	1,876,911	172	99,213	188	703,046	199
150	140	**Singer** (Stamford, Conn.)	2,833,600	1,573,200	194	38,400	321	445,300	270

¶Includes sales from discontinued operations of at least 10%, see explanation of "sales" on page 280.

N.A. Not available.

**Reflects an extraordinary credit of at least 10%, see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%, see the explanations of "net income" and "earnings per share" on page 280.

[20] Figures are for fiscal year ending April 30, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
11,202	319	5.5	172	14.1	237	4.07	3.51	0.89	16.42	152	(2.91)	257	7.52	251	29
46,704	94	3.9	301	20.1	69	4.45	3.56	1.15	14.49	190	(17.32)	356	10.13	187	45
35,094†	128	1.5	425	4.4	440	2.69	1.38	2.44	0.98	387	(8.97)	295	3.67	339	33
29,500	150	3.8	305	11.7	311	9.01	8.20	(1.96)‡	—		8.60	177	4.09	327	28
41,100	109	11.4	26	41.1	5	14.20	5.03	1.78	23.08	72	94.69	4	20.67	38	33
41,841	105	5.4	179	12.9	278	4.11	3.32	1.95	7.74	322	(5.98)	275	3.94	334	28
7,018	405	4.8	229	16.8	152	2.55	1.93	0.29	24.28	62	(17.77)	359	22.21	27	20
59,000	63	3.0	358	10.2	360	2.08	1.77	0.25	23.60	66	(3.53)	261	20.47	40	34
38,940	115	3.9	298	10.8	348	4.15	4.26	1.45	11.09	261	(10.73)	307	5.54	290	45
64,000	54	8.7	64	16.3	168	2.55	2.24	0.23	27.20	47	(10.96)	308	13.18	130	38
41,700	106	4.7	237	17.0	148	7.25	6.24	1.69	15.68	167	26.07	83	11.17	164	20
13,545	282	3.4	330	9.0	384	1.94	3.66	0.58	12.83	221	(23.47)	392	14.96	95	29
35,700	123	8.7	63	19.5	82	4.58	4.08	1.23	14.05	196	8.99	172	9.25	209	42
34,200†	131	2.5	389	6.4	421	4.40	9.32	0.02‡	71.49	3	(25.11)	398	8.18	235	33
8,889	365	—		—		N.A.	N.A.	N.A.	—		—		—		20
65,000	52	6.1	141	11.2	327	7.72	9.51	0.06	62.53	6	(38.97)	450	6.66	273	44
3,170	474	0.7	450	8.7	387	1.02	2.15	0.03**	42.28	18	(48.62)	462	17.46	66	29
55,200†	73	8.0	80	19.7	77	4.26	3.72	1.19	13.60	205	29.31	69	4.23	321	36
45,000	97	0.3	455	0.7	456	0.12	2.41	1.41	(21.84)	415	17.23	137	(1.89)	412	42
47,370	92	5.7	161	15.1	204	9.71	8.08	3.81	9.81	289	(20.00)	373	4.39	318	45
21,869	197	5.1	200	17.0	147	4.67	4.15	1.37	13.05	216	12.59	159	2.91	352	20
36,600	120	6.3	133	13.0	274	6.27	6.34	1.53	15.15	178	(1.69)	246	8.23	234	28
42,196	104	5.0	212	12.9	279	4.18	1.81	(387.17)‡	—		7.84	180	(10.28)	445	29
49,000	87	4.5	249	12.4	290	4.06	2.30	2.06	7.02	335	(4.85)	270	4.23	323	34
25,000	176	4.5	255	12.2	301	2.43	2.51	0.80	11.75	246	25.19	96	14.43	101	27
76,300	40	5.2	191	13.6	251	5.56	5.96	1.19	16.67	146	(18.70)	368	4.89	303	36
30,000	146	2.8	370	15.4	198	7.04	17.52	1.70	15.27	175	23.98	101	13.04	131	20
66,900	48	4.5	254	6.8	414	3.58	1.99	2.02	5.89	347	(32.06)	428	(5.91)	435	44
60,000	60	3.6	316	15.9	179	5.95	5.22	0.89‡	20.92	89	11.16	164	8.77	222	20
41,200	108	6.1	140	16.7	156	5.39	5.03	1.61**	12.84	220	(21.93)	386	17.11	71	41
49,021	86	3.2	345	14.2	230	7.67	5.70	0.90‡	23.90	63	6.74	190	9.45	205	36
64,000	53	3.5	319	9.8	371	4.10	2.90	1.52	10.43	273	43.85	32	3.11	349	22
41,500	107	6.8	113	13.0	267	2.95	3.48	1.38	7.89	319	2.52	216	5.26	296	42
48,200	89	12.7	18	24.2	29	19.96	15.23	0.61	41.74	20	(3.82)	263	31.60	1	45
17,500†	232	7.0	105	19.7	79	3.57	2.38	0.60	19.52	108	43.35	34	22.74	22	36
26,250†	169	4.1	284	8.9	386	3.08	5.91	0.43‡	21.76	85	(26.81)	405	9.41	206	33
63,000	57	10.7	31	12.8	281	6.70	5.45	0.35	34.34	30	(8.95)	294	12.92	133	44
33,706	134	3.4	326	10.0	365	5.55**	3.57	0.12‡	46.73	12	(4.27)	265	3.69	338	30
48,933	88	2.6	378	8.1	396	3.01	4.35	2.04	3.97	370	17.87	132	7.36	256	40
28,407	155	2.4	396	6.2	422	2.47	3.46	1.27	6.88	336	(35.47)	440	3.55	341	26
40,000	111	3.3	340	11.4	323	2.26	2.57	1.29	5.77	350	30.10	63	0.51	385	20
39,000	114	9.1	58	22.1	38	6.02	4.26	0.11‡	49.22	11	(2.46)	254	27.76	7	45
29,600	148	3.9	302	8.9	385	4.50	5.58	(2.74)‡	—		5.83	193	9.76	200	26
52,647	79	8.5	174	10.8	344	4.48	4.23	1.19	14.18	194	1.20	223	4.84	305	44
32,400	137	13.6	14	19.9	73	5.36	5.54	1.74	11.91	242	3.07	214	5.50	292	42
23,800	182	3.7	313	12.0	304	4.00	4.84	0.61	20.69	91	(4.13)	264	11.50	159	26
31,398	144	7.1	101	15.5	195	9.12	7.65	(0.46)‡	—		30.06	64	14.19	107	26
48,000	90	6.0	144	18.2	111	4.15	5.36	0.46	24.60	61	(33.05)	431	11.67	157	23
50,000	84	3.5	322	14.1	234	4.87	4.30	1.23	14.75	186	7.59	184	8.36	230	45
86,000	50	1.4	429	8.6	389	1.93	1.92	3.92	(6.84)	406	16.46	144	(11.83)	449	26

[26] Figures include GK Technologies (1980 rank: 275), acquired May 14, 1981.

[27] Figures include Memorex (1980 rank: 358), acquired December 31, 1981.

[28] Figures include Crouse-Hinds (1980 rank: 367), acquired April 29, 1981.

[29] Figures are for fiscal year ending November 30, 1981.

THE 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
151	143	**St. Regis Paper** (New York)	2,818,798	2,788,292	110	179,218	108	1,453,554	91
152	131	**AMAX** (Greenwich, Conn.)	2,799,400	5,486,600	47	230,800	81	2,555,900	44
153	153	**Campbell Soup** (Camden, N.J.)[19]	2,797,663	1,722,876	181	129,717	149	1,000,510	153
154	154	**Eli Lilly** (Indianapolis)	2,773,205	2,902,262	103	374,478	48	1,886,260	68
155	146	**Borg-Warner** (Chicago)	2,761,200	2,191,200	152	172,100	117	1,235,900	116
156	177	**NL Industries** (New York)	2,738,292¶	2,298,470	142	315,983	60	1,163,804	128
157	158	**Hercules** (Wilmington, Del.)	2,718,366	1,997,144	162	136,481	141	1,051,357	139
158	157	**Dana** (Toledo)	2,711,080	1,967,370	164	115,602	159	1,003,284	152
159	159	**Pennzoil** (Houston)	2,681,751	2,998,565	98	221,642	86	1,102,978	134
160	151	**Avon Products** (New York)	2,613,800	1,567,800	195	219,900	88	933,000	166
161	160	**Quaker Oats** (Chicago)[6]	2,599,500	1,454,100	203	105,200	177	612,600	210
162	155	**American Motors** (Southfield, Mich.)	2,588,923	1,100,720	241	(136,563)	483	293,848	338
163	171	**General Tire & Rubber** (Akron, Ohio)[29]	2,524,309¶	1,844,431	174	110,854	164	1,030,489	143
164	178	**American Petrofina** (Dallas)	2,504,038	1,146,081	231	74,140	237	542,665	234
165	145	**American Standard** (New York)	2,471,346	1,574,285	193	111,490	163	658,159	204
166	170	**Whirlpool** (Benton Harbor, Mich.)	2,450,088	1,133,972	235	125,560	151	791,829	181
167	188	**Murphy Oil** (El Dorado, Ark.)	2,446,823	2,776,881	111	163,006	122	795,476	179
168	167	**McGraw-Edison** (Rolling Meadows, Ill.)	2,428,536	1,761,406	177	84,110	212	584,634	217
169	165	**Owens-Corning Fiberglas** (Toledo)	2,375,059	1,601,929	189	49,849	290	773,587	183
170	186	**Interco** (St. Louis)[11]	2,368,456	1,469,137	201	124,330	152	812,560	176
171	172	**Revlon** (New York)	2,365,938	2,316,642	138	174,821	112	938,733	165
172	185	**Abbott Laboratories** (North Chicago, Ill.)	2,342,524	2,355,613	135	247,283	78	1,152,050	129
173	163	**Gillette** (Boston)	2,334,397	1,759,016	179	124,291	153	719,969	194
174	174	**Ogden** (New York)	2,324,289	1,646,216	183	65,079	250	453,225	267
175	176	**Kellogg** (Battle Creek, Mich.)	2,321,304	1,279,088	214	205,416	98	810,267	177
176	179	**Scott Paper** (Philadelphia)	2,309,444	2,298,683	141	133,340	145	1,287,612	109
177	164	**Uniroyal** (Middlebury, Conn.)	2,260,100	1,458,230	202	51,640**	282	521,402	236
178	175	**Colt Industries** (New York)	2,242,552	1,490,316	199	109,550	168	735,715	191
179	173	**Gould** (Rolling Meadows, Ill.)	2,239,700¶	1,597,800	190	95,700	194	809,600	178
180	●	**Engelhard** (Edison, N.J.)	2,191,792	705,280	315	66,392	248	375,704	301
181	166	**Manville** (Denver)[30]	2,186,005	2,297,814	143	60,320	260	902,484	169
182	204	**MAPCO** (Tulsa)	2,182,463	1,612,754	187	96,890	192	558,295	224
183	180	**Fruehauf** (Detroit)	2,175,119	1,556,765	196	21,357	399	518,980	238
184	184	**White Consolidated Industries** (Cleveland)	2,172,772	1,268,300	215	62,032	256	476,924	256
185	224	**Baker International** (Orange, Calif.)[9]	2,140,016	1,808,545	175	224,989	85	945,782	163
186	194	**Times Mirror** (Los Angles)	2,130,756	1,917,212	169	150,331	130	915,203	167
187	233	**Superior Oil** (Houston)	2,057,419	4,520,809	60	361,291	51	2,151,436	56
188	182	**Allis-Chalmers** (West Allis, Wis.)	2,041,844	1,594,247	191	(28,841)	475	685,850	201
189	191	**J.P. Stevens** (New York)[12]	2,031,335	1,142,590	234	(22,874)	472	485,617	251
190	190	**Koppers** (Pittsburgh)	2,018,562	1,328,175	210	51,642	281	644,062	207
191	189	**Jim Walter** (Tampa, Fla.)[19]	2,017,125	2,558,543	124	23,394**	391	711,149	196
192	218	**A.E. Staley Manufacturing** (Decatur, Ill.)[9]	2,006,196	859,467	286	105,821	176	477,745	254
193	195	**Olin** (Stamford, Conn.)	2,001,346	1,618,034	185	92,836	200	793,187	180
194	219	**Northrop** (Los Angeles)	1,990,700	1,257,400	220	47,900	293	507,000	240
195	203	**SmithKline** (Philadelphia)	1,985,341	1,863,452	170	370,000	49	1,225,804	122
196	201	**International Minerals & Chemical** (Northbrook, Ill.)[6]	1,984,900	1,975,200	163	153,800	127	975,300	156
197	257	**Amstar** (New York)[6]	1,980,375	671,862	326	73,440	238	363,950	303
198	181	**Williams Companies** (Tulsa)	1,976,336	2,445,877	130	109,540	169	1,027,245	146
199	207	**Central Soya** (Fort Wayne, Ind.)[19]	1,975,042	586,890	343	19,901	406	305,847	328
200	217	**Cummins Engine** (Columbus, Ind.)	1,962,461	1,415,797	206	115,211	161	547,795	231

●Not among the 500 or the Second 500 in 1980.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

[30] Name changed from Johns-Manville October 29, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			EARNINGS PER SHARE GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
27,800	159	6.4	128	12.3	296	5.19	5.18	0.85‡	19.83	104	(2.46)	253	7.96	240	26
19,927	213	8.2	70	9.0	383	3.31	7.48	1.38	9.30	298	20.36	117	14.28	104	33
39,965	113	4.6	242	13.0	275	4.00	3.69	2.00	7.13	328	(0.87)	239	4.21	324	20
28,600	153	13.6	16	19.9	75	4.93	4.82	1.42	13.25	214	(8.64)	291	2.46	359	42
55,700†	71	6.2	134	13.9	242	4.00	2.93	1.23	12.52	225	29.96	66	12.19	141	45
23,000	186	11.6	25	27.2	16	4.09	2.47	0.07‡	52.27	10	8.28	181	28.31	14	28
22,777	191	5.0	214	13.0	273	3.09	2.60	1.29	9.32	314	25.70	90	2.76	355	28
36,200	126	4.3	279	11.5	317	3.25	2.78	0.98	12.74	222	48.80	27	11.31	182	40
10,000	344	8.3	66	20.1	70	4.23	5.90	0.68‡	20.06	100	(0.36)	236	17.82	63	29
33,700	135	8.4	67	23.8	32	3.66	4.01	1.89	6.83	337	(3.31)	259	(6.64)	436	43
30,900	145	4.0	286	17.2	141	5.01	4.55	1.25‡	14.69	184	22.63	107	4.54	314	20
21,603	198	—		—		(2.44)	(6.00)	0.40**	—		(38.66)	449	(9.26)	444	40
36,000	121	4.4	262	10.8	347	4.51	1.65	2.07	8.10	317	25.07	97	6.22	280	30
2,750	479	3.0	359	13.7	249	6.86	9.69	1.71	14.94	182	(0.08)	232	15.74	87	29
42,700	103	4.5	252	16.9	150	4.07	5.69	(3.57)‡	—		(4.48)	266	20.60	39	37
19,312	218	6.1	201	15.9	182	3.46	2.81	1.41	9.29	296	40.14	38	2.10	366	36
4,814	451	6.7	117	20.5	61	4.39	4.03	0.34	29.15	44	(37.00)	444	20.97	34	29
34,000	133	3.5	325	14.4	221	5.11	3.12	1.90‡	10.40	275	5.01	201	6.91	267	36
23,800†	183	2.1	410	6.4	416	1.63	1.76	0.86	6.60	342	(11.40)	313	1.34	374	32
83,000	70	5.2	190	15.3	201	7.61	7.35	3.42	8.33	313	4.86	202	4.41	317	23
35,200	127	7.4	92	18.6	99	4.10	4.67	1.33	11.02	241	(32.26)	430	1.27	376	43
31,602	142	10.6	33	21.6	48	2.01	1.73	0.21	25.34	58	(1.98)	250	15.21	94	42
32,300	139	5.3	185	17.3	137	4.11	4.11	2.13	6.79	338	27.66	76	3.51	342	34
31,596	141	2.8	371	14.4	226	4.86	4.56	0.84	19.19	111	(11.33)	311	18.86	83	37
20,260†	208	8.8	61	25.4	22	2.69	2.42	0.76	13.47	208	18.15	130	10.34	183	20
20,300	207	5.8	156	10.4	357	3.22	3.43	0.76	15.53	166	(18.06)	362	4.73	306	26
24,611	178	2.3	404	9.9	366	1.62**	(0.30)	1.42	1.33	363	17.10	139	(4.74)	431	30
26,000†	156	4.9	225	14.9	210	4.01	3.09	0.42	25.31	59	30.56	62	23.78	18	33
28,776	151	4.3	273	11.8	307	2.68	2.10	1.29	7.59	324	(4.53)	267	6.90	266	36
8,600†	370	3.0	352	17.7	128	2.48	N.A.	N.A.	—		—		—		33
27,000	163	2.8	372	6.7	415	1.53	2.47	2.36	(4.20)	402	(34.08)	434	(3.77)	425	32
6,835	409	4.4	256	17.4	136	3.51	4.46	0.57	19.93	101	(24.29)	395	16.56	77	10
27,000	162	1.0	442	4.1	442	1.74	2.63	2.21	(2.36)	398	(15.47)	349	1.10	380	40
25,568	174	2.9	367	13.0	271	4.34	3.94	1.55	10.84	264	17.84	134	9.26	208	36
25,600	173	10.5	36	23.8	30	3.36	2.11	0.24	30.20	41	(20.72)	377	22.49	25	45
27,049	161	7.1	103	16.4	161	4.40	4.08	1.04	15.52	169	14.38	150	9.02	216	27
6,795	410	17.6	7	18.8	164	2.84	2.64	0.04	53.15	9	(6.50)	278	18.02	59	10
26,775†	166	—		—		(2.86)	3.60	0.33‡	—		(51.55)	463	6.34	276	45
37,800	118	—		—		(1.59)	1.43	(0.04)	—		20.71	115	10.80	174	22
20,113†	211	2.6	382	8.0	397	1.58	2.02	0.82	6.78	339	(26.40)	403	11.85	152	28
23,800	184	1.2	436	3.3	448	1.34**	4.85**	1.88	(3.33)	401	(29.82)	414	(2.05)	414	26
4,200	463	5.3	188	22.2	37	4.75	2.51	0.34	30.17	42	(14.63)	343	20.78	37	20
20,300	206	4.6	241	11.7	310	3.86	1.41	1.02	14.29	192	25.75	88	16.30	81	28
31,400	143	2.4	395	9.4	375	3.31	6.04	0.98	12.94	218	(10.46)	305	27.21	8	41
22,914	189	18.6	5	30.2	10	5.56	4.66	0.77	21.84	64	(12.82)	328	20.18	43	42
10,600	328	7.7	85	15.8	186	5.63	5.38	0.48	27.65	45	(46.71)	461	19.33	50	28
8,089†	383	3.7	310	20.2	68	8.04	3.32	2.48	12.46	228	16.92	142	11.23	163	20
6,256	425	5.5	167	10.7	350	3.67	5.07	1.72	7.87	320	(39.52)	462	5.51	291	28
9,835	347	1.0	440	6.5	417	1.31	2.38	1.05	2.24	378	(17.82)	381	4.53	315	20
22,786	190	5.9	153	21.0	53	13.24	(1.31)	3.26	15.04	180	23.46	104	0.26	386	45

THE 500 LARGEST INDUSTRIALS

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
'81	'80		($000)	($000)	RANK	($000)	RANK	($000)	RANK
201	192	**SCM** (New York)[6]	1,938,446	1,077,480	244	56,511	269	489,038	249
202	213	**Anderson Clayton** (Houston)[3]	1,929,647	895,384	274	51,399	283	503,503	242
203	211	**Grumman** (Bethpage, N.Y.)	1,915,529	1,073,320	245	20,486	403	271,798	352
204	229	**Allegheny International** (Pittsburgh)[31]	1,907,809	2,429,414	131	81,000	220	451,553	268
205	206	**Upjohn** (Kalamazoo, Mich.)	1,898,334	1,940,485	167	181,764	105	965,267	159
206	212	**Rohm & Haas** (Philadelphia)	1,884,664	1,348,627	208	93,085	199	759,911	184
207	196	**Squibb** (New York)	1,846,414	1,950,360	165	104,815	178	1,029,625	144
208	198	**Marmon Group** (Chicago)	1,819,235	1,188,495	226	83,390	213	454,155	266
209	255	**Wheelabrator-Frye** (Hampton, N.H.)	1,812,758¶	1,759,637	178	91,350	202	738,915	190
210	209	**Schering-Plough** (Kenilworth, N.J.)	1,808,800	2,285,500	144	179,300	107	1,285,800	110
211	214	**Sterling Drug** (New York)	1,792,925	1,264,980	216	130,303	148	826,112	173
212	193	**Gold Kist** (Atlanta)[6]	1,781,607	559,360	349	N.A.[23]		114,332	461
213	272	**Hughes Tool** (Houston)	1,759,105	2,044,933	159	255,208	78	1,149,176	131
214	208	**Ethyl** (Richmond, Va.)	1,757,195	1,261,954	218	90,891	203	718,567	195
215	200	**Emhart** (Farmington, Conn.)	1,747,100	1,068,200	247	75,500	233	460,900	263
216	216	**PACCAR** (Bellevue, Wash.)	1,735,426	848,014	287	85,113	210	601,589	214
217	215	**Stauffer Chemical** (Westport, Conn.)	1,726,236	2,033,947	160	149,924	131	1,029,118	145
218	205	**National Distillers & Chemical** (New York)	1,703,100*	1,706,200	182	136,700	140	1,007,200	151
219	230	**General Signal** (Stamford, Conn.)	1,702,455	1,222,840	223	117,132	158	753,152	187
220	●	**Foster Wheeler** (Livingston, N.J.)	1,674,074	959,286	264	64,302	253	330,597	318
221	246	**Whittaker** (Los Angeles)[12]	1,671,837	867,095	282	69,328	241	345,459	310
222	222	**Union Camp** (Wayne, N.J.)	1,665,888	1,779,728	176	168,948	119	1,087,356	137
223	232	**Cabot** (Boston)[9]	1,622,755	1,258,904	219	110,167	165	606,401	213
224	228	**Crane** (New York)	1,611,342	962,663	263	53,811	278	415,747	281
225	●	**American Hoechst** (Somerville, N.J.)[32]	1,609,000	1,228,000	222	24,000	384	N.A.	
226	227	**Corning Glass Works** (Corning, N.Y.)	1,598,500	1,613,400	186	97,400	191	965,400	158
227	239	**Heublein** (Farmington, Conn.)[6]	1,591,408*	1,120,939	238	88,379	205	551,731	230
228	242	**Air Products & Chemicals** (Allentown, Pa.)[9]	1,570,115	1,876,987	171	126,039	150	774,135	182
229	254	**Harris** (Melbourne, Fla.)[6]	1,551,514	1,313,804	211	103,958	180	555,997	226
230	243	**Westvaco** (New York)[12]	1,550,529	1,262,620	217	100,791	186	701,820	200
231	264	**Sherwin-Williams** (Cleveland)	1,536,807	864,438	285	31,385	339	305,020	330
232	●	**Natomas** (San Francisco)	1,535,266	2,611,475	122	232,527	80	1,125,741	133
233	223	**National Can** (Chicago)	1,533,960	771,172	304	24,678	382	315,868	323
234	199	**Asarco** (New York)	1,531,506	2,092,813	157	50,038	288	1,018,783	148
235	241	**Lear Siegler** (Santa Monica, Calif.)[6]	1,530,699	864,641	284	76,067	230	410,934	283
236	247	**Chesebrough-Pond's** (Greenwich, Conn.)	1,529,674	1,059,433	249	114,822	162	574,404	220
237	244	**Sunbeam** (Chicago)[13]	1,518,703	953,882	266	47,502	295	424,306	278
238	220	**Joseph E. Seagram & Sons** (New York)[19,33]	1,506,532*	5,397,353	49	1,514,397**	11	2,548,661	45
239	248	**Baxter Travenol Laboratories** (Deerfield, Ill.)	1,503,890	1,590,743	192	150,581	129	978,325	155
240	249	**Great Northern Nekoosa** (Stamford, Conn.)	1,493,000	1,307,600	213	95,000	197	755,100	185
241	234	**U.S. Gypsum** (Chicago)	1,491,172	1,145,195	232	74,171	236	709,288	197
242	262	**Crown Central Petroleum** (Baltimore)	1,487,299	542,483	356	3,362	456	191,326	411
243	240	**Evans Products** (Portland, Ore.)	1,471,046	943,436	260	17,620	413	291,557	341
244	251	**Hershey Foods** (Hershey, Pa.)	1,451,151	806,800	296	80,362	222	469,664	258
245	225	**AMF** (White Plains, N.Y.)	1,443,156	951,087	268	41,981	308	454,827	265
246	237	**Phelps Dodge** (New York)	1,438,555	2,144,394	155	69,321**	242	1,089,003	136
247	253	**Geo. A. Hormel** (Austin, Minn.)[12]	1,433,966	425,065	403	27,283	366	226,741	381
248	238	**Black & Decker Manufacturing** (Towson, Md.)[9]	1,431,001	1,164,772	230	65,662	249	607,981	212
249	245	**Blue Bell** (Greensboro, N.C.)[9]	1,427,164	818,906	293	46,676	297	429,276	274
250	250	**Timken** (Canton, Ohio)	1,427,158	1,101,431	240	101,115	184	822,570	175

●Not among the 500 or the Second 500 in 1980.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

N.A. Not available.

*Does not include excise taxes; see the explanation of "sales" on page 280.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

§Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

[31] Name changed from Allegheny Ludlum Industries April 24, 1981.

[32] Wholly owned by Hoechst AG.

[33] Wholly owned by Seagram.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
27,600	160	2.9	363	11.6	315	5.80	5.55	(0.24)‡	—		(0.95)	240	6.77	271	28
15,800†	256	2.7	374	10.2	361	4.09	4.00	0.88‡	16.61	150	35.51	52	13.74	114	20
28,600	152	1.1	439	7.5	404	1.45	2.35	(2.36)	—		3.66	210	11.89	151	41
52,742	78	4.2	277	17.9	120	7.48	4.11	(0.64)	—		(19.00)	369	16.21	82	36
21,410	201	9.6	47	18.8	95	6.04	5.71	1.35	16.16	156	(17.41)	357	6.56	274	42
13,458	285	4.9	220	12.2	298	7.21	7.26	2.31	12.06	237	37.06	48	4.07	328	28
23,000	187	5.7	163	10.2	362	2.10	2.65	1.44	3.85	371	15.14	148	0.08	392	42
17,000	241	4.6	246	18.4	105	N.A.	N.A.	N.A.	—		—		—		33
23,000	188	5.0	211	12.4	291	4.78	4.31	0.21‡	36.69	25	(13.10)	330	11.09	167	45
27,000	164	9.9	45	13.9	241	3.31	4.45	1.11	11.56	252	(26.77)	404	(1.45)	407	42
25,465	175	7.3	95	15.8	186	2.15	2.04	1.08	7.13	331	2.09	219	(0.10)	395	42
8,750†	368	—		—		N.A.	N.A.	N.A.	—		—		—		20
19,300	219	14.5	10	22.2	36	4.60	2.64	N.A.	—		(15.61)	350	—		45
14,500	272	5.2	196	12.6	285	4.56	4.49	1.52	11.61	248	(7.82)	284	11.35	161	28
32,349	138	4.3	271	16.4	163	6.06	5.47	1.92	12.18	233	17.02	141	10.67	178	45
10,529	331	4.9	223	14.1	232	9.39	8.94	2.68	13.36	213	18.73	125	13.63	118	40
12,233	303	8.7	66	14.6	217	3.41	3.11	0.62	18.59	121	(0.36)	237	13.32	124	28
12,000	307	8.0	76	13.6	253	3.97	2.96	1.10	13.89	203	(2.07)	251	12.03	144	28
26,621	167	6.9	108	15.6	191	4.23	4.01	1.01	15.40	172	(10.38)	304	10.61	177	38
17,000†	238	3.8	364	19.5	87	1.87	1.74	0.23	23.31	70	(38.63)	448	21.56	30	34
17,000	240	4.1	282	20.1	71	4.40	3.90	0.42‡	26.48	53	18.32	127	13.72	116	34
14,981	265	10.1	41	15.5	192	6.95	6.80	1.15	19.71	106	4.0[illegible]	207	10.93	160	26
7,700	390	6.8	114	18.2	110	3.50	4.86	0.54	20.56	94	(16.28)	351	17.41	68	33
15,457	259	3.3	336	12.9	276	5.27	4.12	0.89	19.47	109	(15.21)	348	19.37	49	33
9,291	356	1.5	427	—		N.A.	N.A.	N.A.	—		—		—		28
29,900	147	6.1	139	10.1	364	5.32	6.26	1.93‡	10.67	270	(10.08)	301	(0.65)	402	32
28,500	154	5.6	166	16.0	176	4.09	3.62	1.65	9.50	282	26.22	82	(0.72)	403	49
16,200	249	8.0	75	16.3	167	4.42	4.07	0.60	22.10	81	(7.13)	280	13.52	119	28
25,800	172	6.7	116	18.7	98	3.37	2.63	0.50	19.04	114	(19.49)	371	15.57	91	36
15,040	264	6.5	121	14.4	225	3.95	3.47	0.10‡	37.80	23	5.42	197	14.79	98	26
23,507	185	2.0	412	10.3	358	3.07	2.44	1.24	9.49	283	28.44	74	3.42	346	28
4,974	447	15.1	8	20.7	59	4.29	4.02	0.03‡	64.26	4	(31.43)	421	14.29	103	10
11,978†	308	1.6	420	7.8	401	2.38	5.48	1.80	3.48	374	(1.24)	243	6.72	272	34
12,500†	295	3.3	342	4.9	436	1.54	8.02	1.72	(1.10)	392	(37.23)	446	8.32	231	33
23,986	181	5.0	217	18.5	101	4.71	4.23	0.06	54.70	8	(24.33)	386	17.27	69	38
21,327	202	7.5	91	20.0	72	3.52	3.10	0.97	13.76	201	25.40	93	4.76	307	43
28,000	157	3.1	346	11.2	328	3.16	3.30	1.56	7.36	327	74.80	9	5.16	297	36
11,000	320	100.5	1	59.4	2	N.A.	N.A.	N.A.	—		—		—		49
29,559	149	10.0	43	15.4	197	2.15	1.86	0.33	20.61	92	28.10	75	7.21	260	42
12,100†	304	6.4	127	12.6	287	5.86	6.16	1.06	18.63	117	(0.70)	236	10.86	172	26
17,800†	229	5.0	216	10.5	353	4.49	5.78	1.26	13.55	206	8.79	174	8.10	237	32
1,656	488	0.2	456	1.8	454	0.34	2.66	0.15	8.53	309	(45.56)	458	12.49	139	29
16,400	246	1.2	434	6.0	424	1.03	2.96	1.18	(1.35)	394	(6.24)	276	2.18	365	37
12,450	298	5.5	169	17.1	145	5.61	4.38	1.55	13.73	202	60.61	17	8.59	227	20
21,320	203	2.9	364	9.2	381	1.84	2.76	2.37	(2.50)	399	31.92	56	0.85	383	47
14,628	269	4.8	230	6.4	420	3.12**	4.20	3.69	(1.66)	396	(6.38)	277	4.10	326	33
7,796	388	1.9	418	12.0	303	2.84	3.41	1.78	4.96	369	24.79	98	9.86	196	20
18,900	222	4.6	245	10.8	345	1.98	2.14	0.61	9.84	288	(13.56)	335	(2.71)	419	45
34,000	132	3.3	341	10.9	342	3.70	5.40	1.21	11.83	244	4.06	208	7.11	262	23
20,920	204	7.1	102	12.3	297	9.01	8.26	3.58	9.67	291	12.66	157	9.76	190	46

THE 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
251	236	**Polaroid** (Cambridge, Mass.)	1,419,600	1,434,700	205	31,190	342	868,200	160
252	265	**Pitney Bowes** (Stamford, Conn.)	1,414,414	1,214,724	224	66,536	240	603,488	243
253	231	**Chromalloy American** (St. Louis)	1,407,851¶	987,333	259	13,871	428	394,061	289
254	278	**Hammermill Paper** (Erie, Pa.)	1,399,604	842,347	288	46,686	263	360,219	307
255	340	**ConAgra** (Omaha)[21]	1,376,806	500,213	371	27,071	369	123,306	456
256	262	**Armstrong World Industries** (Lancaster, Pa.)	1,376,200	938,500	271	47,078	290	601,823	218
257	235	**Crown Cork & Seal** (Philadelphia)	1,373,866	882,642	279	64,807	251	566,657	222
258	270	**Gannett** (Rochester, N.Y.)	1,367,171	1,448,108	204	172,506	114	836,376	172
259	226	**Clark Equipment** (Buchanan, Mich.)	1,359,663	1,036,186	250	29,940	349	614,006	208
260	273	**Brunswick** (Skokie, Ill.)	1,344,666¶	1,038,346	251	66,787	247	496,153	249
261	259	**Diamond International** (New York)	1,341,450	931,969	272	31,780	338	530,604	235
262	329	**Fairchild Industries** (Germantown, Md.)	1,338,906	902,440	273	64,318	262	227,318	379
263	269	**Brown Group** (St. Louis)[12]	1,337,779	591,342	342	55,120	272	336,944	314
264	260	**Norton** (Worcester, Mass.)	1,334,626	1,018,966	254	66,049	196	664,636	229
265	●	**Farmers Union Central Exchange** (St. Paul)[9]	1,325,704	616,864	335	N.A.[23]		295,909	336
266	283	**Avnet** (New York)[9]	1,316,224	630,764	331	66,008	246	427,461	270
267	279	**Witco Chemical** (New York)	1,291,878	725,360	309	38,580	318	296,152	335
268	271	**Richardson-Vicks** (Wilton, Conn.)[6,34]	1,291,400¶	763,300	306	79,300	224	466,400	264
269	277	**Zenith Radio** (Glenview, Ill.)	1,275,200	743,200	308	15,600	421	297,400	333
270	263	**Campbell Taggart** (Dallas)	1,267,814	614,763	336	41,864	309	226,016	383
271	284	**R.R. Donnelley & Sons** (Chicago)	1,243,859	865,797	283	79,016	225	560,021	223
272	285	**Knight-Ridder Newspapers** (Miami)	1,237,083	964,736	260	100,383	187	679,381	202
273	296	**Louisiana Land & Exploration** (New Orleans)	1,236,200	1,549,300	197	145,200	135	822,800	174
274	281	**AMP** (Harrisburg, Pa.)	1,234,296	1,028,411	253	134,770	143	660,510	203
275	280	**Libbey-Owens-Ford** (Toledo)	1,226,514	892,986	277	11,834	435	490,899	248
276	266	**West Point-Pepperell** (West Point, Ga.)[19]	1,221,533	623,413	334	41,063	312	361,629	304
277	356	**Smith International** (Newport Beach, Calif.)	1,194,159	1,034,770	252	133,116	146	612,965	209
278	304	**GATX** (Chicago)	1,190,699	2,840,166	106	66,649	243	555,706	228
279	293	**Akzona** (Asheville, N.C.)	1,187,583	836,090	291	11,598	436	320,033	321
280	276	**Pennwalt** (Philadelphia)	1,182,129¶	774,656	303	41,595	310	366,001	298
281	295	**Lever Brothers** (New York)[36]	1,173,100	471,100	382	(11,500)	468	196,900	404
282	290	**Airco** (Montvale, N.J.)[6,37]	1,166,570	1,144,612	233	62,142	255	647,339	206
283	●	**Mid-America Dairymen** (Springfield, Mo.)	1,164,906	245,863	480	N.A.[23]		85,006	471
284	312	**Alumax** (San Mateo, Calif.)	1,163,838	1,131,832	237	110,116	166	586,720	216
285	262	**U.S. Industries** (Stamford, Conn.)	1,161,005¶	686,837	322	(62,671)	480	426,187	277
286	291	**Harsco** (Wormleysburg, Pa.)	1,158,354	701,799	317	61,534	257	392,179	292
287	307	**National Semiconductor** (Santa Clara, Calif.)[21]	1,157,146	753,742	307	52,426	278	333,357	316
288	267	**Wheeling-Pittsburgh Steel** (Pittsburgh)	1,151,112	1,119,485	239	60,059	261	467,997	259
289	302	**Square D** (Palatine, Ill.)	1,144,247	811,669	294	102,827	182	471,641	257
290	288	**Rexnord** (Milwaukee)[13]	1,130,039	783,234	301	38,546	319	392,509	291
291	306	**Johnson Controls** (Milwaukee)[9]	1,128,386	792,040	297	48,132	292	358,164	306
292	297	**Ex-Cell-O** (Troy, Mich.)[20]	1,124,494	721,167	310	56,810	268	412,814	282
293	303	**Perkin-Elmer** (Norwalk, Conn.)[16]	1,115,830	840,162	290	78,125	227	449,796	269
294	300	**McGraw-Hill** (New York)	1,110,125	879,387	280	96,117	190	496,115	244
295	296	**Parker-Hannifin** (Cleveland)[9]	1,105,891	777,007	302	64,062	254	428,289	275
296	310	**Federal Co.** (Memphis)[21]	1,099,893	317,756	463	20,121	405	176,724	424
297	317	**Joy Manufacturing** (Pittsburgh)[9]	1,095,257	842,811	288	87,780	207	493,165	246
298	290	**International Multifoods** (Minneapolis)[11]	1,088,110	466,240	384	28,387	359	203,315	402
299	341	**Pacific Resources** (Honolulu)	1,080,404	405,575	415	17,106	416	81,987	474
300	313	**Becton Dickinson** (Paramus, N.J.)[9]	1,066,093	1,004,324	257	75,863	232	569,584	221

●Not among the 500 or the Second 500 in 1980.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

N.A. Not available.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

§Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
16,784	243	2.2	408	3.2	449	0.95	2.60	1.86	(6.50)	404	(14.03)	340	(11.84)	450	38
26,791	165	4.9	221	13.8	245	3.78	4.31	0.84	16.23	155	(21.76)	382	4.68	304	44
20,600†	205	1.0	441	3.5	447	0.65	2.84	1.61	(8.67)	410	(10.00)	300	5.36	294	34
12,380†	300	3.3	338	13.3	263	5.57	5.04	0.68**	23.41	69	9.15	171	9.17	210	26
12,033	305	2.0	414	22.0	39	2.21	1.55	0.29	22.52	73	(20.21)	375	21.20	32	20
22,180†	196	3.4	327	7.8	400	1.88	1.94	1.36	3.29	375	25.24	95	(4.52)	428	22
14,262	275	4.7	235	11.4	319	4.45	4.98	1.41	12.18	234	5.71	195	4.60	311	34
25,000	177	12.6	19	20.6	60	3.17	2.81	0.68	16.64	147	2.78	215	9.09	213	27
15,881	254	2.2	407	4.9	437	2.35	4.18	2.36	(0.04)	391	(8.75)	293	(0.27)	397	45
26,000	171	5.0	219	13.5	255	3.01	1.01	1.37	8.19	315	25.92	85	(3.17)	422	47
17,300†	234	2.4	400	6.0	425	2.04	2.68	2.75	(2.94)	400	29.96	65	7.32	257	26
18,000	225	4.8	231	28.3	17	3.48	4.02	0.56	19.62	107	(60.23)	468	15.39	92	41
26,000	170	4.1	285	16.4	164	5.05	4.11	1.81	10.81	266	44.56	29	7.89	242	31
24,400	179	7.1	99	17.1	144	5.57	5.25	1.06	18.05	131	(25.04)	397	15.76	86	32
2,199	485	—		—		N.A.	N.A.	N.A.	—		—		—		29
12,000	306	5.2	197	15.9	178	3.90	4.15	0.89	15.97	160	1.50	221	20.08	45	36
8,300	374	3.0	366	13.0	270	4.14	4.90	1.31	12.19	232	(12.21)	319	7.57	249	29
10,800	324	6.1	137	17.4	133	3.31	3.56**	1.27**	10.05	286	7.71	182	4.62	310	42
28,000	158	1.2	433	5.2	432	0.82	1.40	1.97**	(8.39)	409	(40.26)	453	(7.17)	440	36
22,754	192	3.3	339	18.5	100	2.50	2.18	0.71	13.41	211	40.29	38	12.04	145	20
15,100†	263	6.4	129	14.1	235	4.20	3.70	1.27	12.71	223	10.32	166	8.09	238	27
19,430†	216	8.1	73	14.8	211	3.09	2.87	0.77	14.91	183	11.49	163	7.39	253	27
3,170	473	11.7	24	17.6	127	3.82	4.74	1.65	8.76	369	(37.19)	445	(1.47)	408	10
19,650	215	10.9	30	20.4	64	3.75	3.65	0.68	18.62	119	0.39	228	9.64	202	36
17,399	233	1.0	445	2.4	452	0.63	2.17	3.97	(16.81)	412	6.87	189	0.47	386	32
22,500	194	3.4	333	11.4	324	4.23	4.66	0.66	20.41	94	15.65	145	14.56	100	22
12,853	291	11.1	28	21.7	40	5.80	3.73	0.36	32.04	35	(27.56)	409	23.05	21	45
10,800	323	5.8	156	12.4	293	5.26	5.10	3.13	5.33	364	(11.37)	312	0.06	394	37
14,697	268	1.0	443	3.6	446	0.95	0.40	2.10	(7.63)	408	(9.66)	298	(4.69)	430	22
10,670	326	3.5	320	10.8	348	4.02	4.20	1.22	12.06	224	4.75	203	6.08	282	28
5,300	440	—		—		N.A.	N.A.	N.A.	—		—		—		43
13,300	287	5.3	184	9.6	373	N.A.	N.A.	N.A.	—		—		—		28
2,610	481	—		—		N.A.	N.A.	N.A.	—		—		—		20
7,316	395	9.5	49	16.7	97	N.A.	N.A.	N.A.	—		—		—		33
18,494	223	—		—		(2.78)	0.74	2.15	—		26.30	81	(1.33)	405	45
15,600	258	5.3	186	15.7	189	3.15	2.47	0.81	14.55	189	22.38	108	15.38	93	34
35,700	124	4.5	251	15.7	188	2.37	2.58	0.07	42.22	19	(52.48)	464	15.64	89	36
11,440†	314	5.2	193	12.8	280	14.28	2.85	0.62**	36.86	24	45.24	28	7.01	265	33
22,700	193	9.0	59	21.8	41	3.82	3.41	1.22	11.21	259	5.43	196	4.50	316	36
17,000	239	3.4	328	9.8	370	1.92	2.09	0.86	8.49	310	(9.84)	290	7.07	263	45
20,000	212	4.3	274	13.4	256	3.43	2.41	1.16	11.56	251	(13.92)	339	9.11	212	36
16,300	247	6.1	207	13.8	246	3.71	3.27	0.50‡	22.19	79	(1.54)	245	13.77	113	45
15,402	260	7.0	164	17.4	134	1.81	1.67	0.34	18.20	127	(21.04)	378	7.86	247	36
14,258	276	8.8	62	19.8	78	3.94	3.48	0.79	17.43	138	15.52	147	15.61	90	27
22,200	195	5.8	155	15.0	208	4.12	3.80	0.95	15.80	164	9.82	168	10.03	190	34
13,000	280	1.8	417	11.4	322	2.47	1.19	0.16	31.46	38	(12.37)	321	19.08	52	20
14,186	277	8.0	77	17.8	123	4.48	3.05	1.09	15.18	177	(1.93)	249	8.69	224	45
7,887	386	2.6	377	14.0	230	3.49	2.31	1.21	11.17	260	25.66	91	11.54	158	20
739	496	1.6	423	20.9	56	1.32	1.55	0.30	15.97	159	31.26	60	—		29
21,900	199	7.1	100	13.3	262	3.61	3.14	1.02	13.47	209	(7.18)	281	4.96	301	36

*Name changed from Richardson-Merrell March 10, 1981, when the prescription-drug business was spun off to Dow Chemical (rank 24).

**Figures are for Richardson-Merrell.

†Wholly owned by Unilever.

††Wholly owned by BOC Financial.

THE 500 LARGEST INDUSTRIALS

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
'81	'80		($000)	($000)	RANK	($000)	RANK	($000)	RANK
301	311	**Tektronix** (Beaverton, Ore.)[21]	1,061,834	953,753	267	80,167	223	557,544	225
302	301	**Cessna Aircraft** (Wichita)[9]	1,060,097	657,641	329	60,566	259	345,578	309
303	267	**CF Industries** (Long Grove, Ill.)	1,053,698	1,132,653	236	N.A.[23]		519,754	237
304	289	**G.D. Searle** (Skokie, Ill.)	1,049,700¶	1,094,300	243	98,700	189	577,500	219
305	319	**Sundstrand** (Rockford, Ill.)	1,045,687	892,894	278	95,011	196	465,412	262
306	305	**Universal Leaf Tobacco** (Richmond, Va.)[6]	1,039,736	405,779	414	31,272	341	178,868	421
307	●	**BASF Wyandotte** (Parsippany, N.J.)[38]	1,038,400	791,400	298	26,700	372	282,600	347
308	330	**NVF** (Yorklyn, Del.)	1,034,024	1,410,508	207	440	459	248,605	367
309	309	**Cyclops** (Pittsburgh)	1,031,414	434,380	397	21,384	398	194,492	407
310	320	**Kaiser Steel** (Oakland, Calif.)	1,029,559	975,946	262	(437,455)	488	262,334	357
311	342	**Dover** (New York)	1,025,521	561,587	347	96,118	193	391,141	293
312	274	**Louisiana-Pacific** (Portland, Ore.)	1,023,050	1,210,930	225	83,280**	214	745,920	189
313	292	**Interlake** (Oak Brook, Ill.)	1,016,605	710,217	314	46,577	300	358,748	305
314	258	**Commonwealth Oil Refining** (San Antonio)	1,012,911	235,735	483	(212,309)**	484	11,319	496
315	315	**Stanley Works** (New Britain, Conn.)	1,009,487	666,470	327	55,368	271	384,099	297
316	314	**Willamette Industries** (Portland, Ore.)	975,640	894,316	276	28,604	357	432,353	273
317	308	**National Gypsum** (Dallas)	965,665	834,849	292	38,824	317	484,972	252
318	338	**Morton-Norwich Products** (Chicago)[6]	957,584	696,511	319	53,010	277	382,202	299
319	335	**Anchor Hocking** (Lancaster, Ohio)	953,421	584,372	344	29,633	352	308,086	326
320	331	**Reichhold Chemicals** (White Plains, N.Y.)	950,112	408,581	410	14,674‡	424	174,831	427
321	294	**ACF Industries** (New York)	939,095	1,240,559	221	47,525	294	404,084	285
322	343	**Cincinnati Milacron** (Cincinnati)	934,395	715,779	313	60,787	258	349,315	308
323	329	**Adolph Coors** (Golden, Colo.)	929,916*	956,384	265	51,970	280	753,567	186
324	385	**Cameron Iron Works** (Houston)[6]	929,003	1,094,349	242	109,996	167	507,223	239
325	433	**Storage Technology** (Louisville, Colo.)	921,963	1,072,689	246	82,400	216	466,010	260
326	395	**CBI Industries** (Oak Brook, Ill.)	919,929	1,013,243	256	84,162	211	393,764	290
327	345	**Quaker State Oil Refining** (Oil City, Pa.)	918,913	509,614	369	27,363	364	239,722	373
328	323	**Lone Star Industries** (Greenwich, Conn.)	917,602	1,178,192	229	56,103	270	438,001	272
329	316	**Springs Mills** (Fort Mill, S.C.)	917,042	546,317	353	39,986	315	364,702	302
330	349	**Mattel** (Hawthorne, Calif.)[39]	915,690	550,493	352	7,898	446	207,299	397
331	327	**Scovill** (Waterbury, Conn.)	908,177¶	557,724	350	(4,534)	464	179,915	419
332	324	**Midland-Ross** (Cleveland)	907,220	688,892	321	24,691	381	292,352	340
333	332	**Newmont Mining** (New York)	903,096	1,932,826	168	375,593**	47	1,303,618	105
334	333	**CertainTeed** (Valley Forge, Pa.)	891,532	663,726	328	(10,916)	467	291,315	342
335	328	**Jos. Schlitz Brewing** (Milwaukee)	881,674*	608,149	337	(20,604)	471	305,438	329
336	348	**Potlatch** (San Francisco)	880,493	1,186,319	227	57,804	264	544,297	233
337	326	**Lubrizol** (Wickliffe, Ohio)	878,291	673,165	325	92,031	201	478,518	253
338	359	**Masco** (Taylor, Mich.)	876,530	940,013	270	88,320	206	492,260	247
339	398	**Bally Manufacturing** (Chicago)	866,447	705,260	316	81,676	218	394,208	288
340	352	**Thomas J. Lipton** (Englewood Cliffs, N.J.)[38]	864,700	534,945	358	49,561	291	301,262	332
341	457	**Wang Laboratories** (Lowell, Mass.)[6]	856,376	894,694	275	78,073	228	465,596	261
342	322	**AM International** (Chicago)[18]	855,546¶	546,213	354	(245,051)	485	13,770	495
343	353	**National Service Industries** (Atlanta)[19]	853,436	404,362	418	50,086	287	276,214	349
344	374	**New York Times** (New York)	841,707	598,865	339	49,970	289	296,198	334
345	321	**Amsted Industries** (Chicago)[9]	837,078	492,115	373	50,600	286	377,827	300
346	403	**Freeport-McMoRan** (New York)[40]	835,404	1,480,313	200	159,366	125	706,965	198
347	377	**Federal-Mogul** (Southfield, Mich.)	832,721	596,520	340	36,194	330	266,924	355
348	370	**Cluett Peabody** (New York)	832,199	442,140	394	21,338	400	205,082	399
349	379	**General Instrument** (New York)[11]	825,074	645,399	330	68,124	244	422,379	279
350	362	**General Cinema** (Chestnut Hill, Mass.)[12]	823,551	503,328	370	44,265	304	203,815	400

¶Includes sales from discontinued operations of at least 10%: see explanation of "sales" on page 280.

N.A. Not available.

*Does not include excise taxes: see explanation of "sales" on page 280.

**Reflects an extraordinary credit of at least 10%: see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year: see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%: see the explanations of "net income" and "earnings per share" on page 280.

[38] Wholly owned by BASF AG.

[39] Figures are for fiscal year ending January 31, 1981.

[40] Name changed from Freeport Minerals April 7, 1981.

		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
EMPLOYEES		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		INDUSTRY
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
24,028	180	7.5	89	14.4	223	4.34	4.66	0.58	22.29	77	(8.48)	290	13.98	110	38
15,838†	255	5.7	162	17.5	129	3.19	1.51	0.44	21.91	82	(12.81)	328	10.81	173	41
2,456	482	—		—		N.A.	N.A.	N.A.	—		—		—		28
16,300	248	9.4	51	17.1	146	1.90	1.85	0.87	8.12	316	18.13	131	5.33	295	42
16,100	251	9.1	57	20.4	63	5.23	4.57	0.19	39.31	22	(22.66)	388	15.86	85	41
14,000†	279	3.0	353	17.5	131	3.55	3.20	0.85	15.37	173	(20.56)	376	18.06	58	21
4,258	460	2.6	380	9.4	374	N.A.	N.A.	N.A.	—		—		—		28
10,200	341	—	459	0.2	458	0.23	0.15	0.13**	5.87	348	(25.16)	399	30.06	3	33
7,800	387	2.1	411	11.0	335	6.21	6.14	1.15	18.37	124	7.24	186	11.84	153	33
10,815†	322	—		—		(61.53)	27.16	(0.15)	—		9.23	170	12.01	147	33
13,423	286	9.4	53	24.6	26	2.69	2.05	0.36	22.28	78	7.06	187	19.62	48	45
14,500	273	8.1	72	11.2	331	2.70**	1.96	N.A.	—		(13.54)	334	—		26
9,875	346	4.6	247	13.0	272	7.59	2.29	2.02	14.15	195	34.17	54	14.82	96	33
800	495	—		—		(14.05)	(0.34)	0.96	—		(71.05)	470	(22.20)	456	29
17,556†	230	5.5	175	14.4	220	2.10	1.94	0.68	11.94	240	4.10	206	9.47	204	34
8,220	376	2.9	362	6.6	416	1.88	4.16	0.91	7.53	325	(12.14)	318	8.88	220	26
12,695	294	4.0	289	8.0	398	2.41	3.66	1.29	6.45	343	5.04	200	8.60	226	32
10,500	332	5.5	170	13.9	243	3.90	3.52	1.75	8.34	312	36.44	50	6.92	266	28
17,100	237	3.1	347	9.6	372	2.89	2.81	1.83	4.68	364	3.40	211	4.31	320	32
5,587	433	1.5	424	8.4	394	1.70‡	1.90	0.54	12.15	236	(0.16)	233	7.37	254	28
12,248	302	5.1	205	11.8	308	5.23	5.02	1.88	10.77	267	(5.29)	271	7.82	245	37
13,602†	281	6.5	120	17.4	132	2.68	3.35	0.07**	43.98	15	(18.56)	366	18.68	56	45
9,750	349	5.6	165	6.9	413	1.48	1.86	N.A.	—		(32.25)	429	—		49
11,217	318	11.8	23	21.7	44	3.62	2.61	0.03‡	61.49	7	(21.84)	384	—		45
15,197	262	8.9	60	17.7	125	2.61	1.76	(0.32)	—		54.70	20	25.81	13	44
13,000	289	9.1	55	21.4	49	4.73	3.81	1.54	11.88	243	(30.78)	418	12.65	137	34
5,000	446	3.0	356	11.4	320	1.26	1.19	0.82	4.39	368	(34.54)	435	(2.50)	415	29
9,584	352	6.1	138	12.8	282	4.52	5.25	1.72‡	10.14	284	(8.25)	287	6.80	270	32
20,200†	210	4.4	264	11.0	336	4.50	1.20	1.08	15.34	174	41.13	36	10.33	184	22
16,000†	253	0.9	446	3.8	443	0.12	1.38	1.11	(19.95)	413	5.12	199	(2.72)	420	47
17,526	231	—		—		(0.50)	2.56	1.54	—		25.90	86	3.42	346	36
13,900	280	2.7	373	8.4	393	2.06	3.70	0.51	14.98	181	(21.90)	385	14.42	102	45
12,400	299	41.6	2	28.8	15	14.30**	7.64	2.14	20.92	90	(1.77)	248	9.87	194	33
8,400	373	—		—		(1.14)	(0.31)	1.52	—		2.49	217	(1.94)	413	32
4,900	448	—		—		(0.71)	0.93	1.22	—		31.85	57	(8.84)	443	49
9,368	354	6.6	119	10.6	351	3.25	3.25	0.09‡	43.14	17	(17.43)	358	13.21	128	26
4,237	461	10.5	37	19.2	92	2.36	2.87	0.58	15.07	179	(25.57)	402	1.24	377	28
10,000	343	10.1	42	17.9	119	3.46	3.03	0.46	21.84	83	24.19	100	8.00	239	34
9,550	353	9.4	50	20.7	58	3.03	2.01	0.21	30.59	40	27.06	78	17.04	73	47
5,869†	430	5.7	160	16.5	159	N.A.	N.A.	N.A.	—		—		—		20
15,770	257	9.1	56	16.8	155	1.36	1.00	0.10	29.82	43	(18.61)	367	23.89	17	44
17,250	235	—		—		(26.71)	0.69	0.30‡	—		(73.41)	471	(17.32)	455	26
17,200	236	5.9	154	18.1	113	3.93	3.54	1.46	10.41	274	29.43	68	5.41	293	36
7,300	398	5.9	152	16.9	151	4.03	3.37	0.80	17.55	136	15.53	146	12.01	149	27
10,300	335	6.0	143	13.4	259	4.68	6.60	0.85	18.60	120	(12.80)	326	20.31	42	33
6,500	418	19.1	4	22.5	34	2.30	2.60	0.21	27.04	49	(27.86)	410	23.10	20	28
14,731	267	4.3	286	13.6	254	2.82	2.88	0.26‡	26.92	50	13.29	154	13.18	129	40
19,676	214	2.6	381	10.4	356	2.25	1.60	1.17	6.76	341	65.68	13	2.20	364	23
26,400	168	8.3	69	16.1	170	7.46	5.90	0.43	33.02	33	43.88	31	22.37	26	36
12,500	296	5.4	182	21.7	42	3.99	2.72	0.88	16.32	154	44.30	30	10.09	189	49

THE 500 LARGEST INDUSTRIALS

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
'81	'80		($000)	($000)	RANK	($000)	RANK	($000)	RANK
351	407	**Big Three Industries** (Houston)	823,280	1,015,259	255	108,854	171	555,765	227
352	373	**Peavey** (Minneapolis)[18]	820.884	385,276	426	23,418	390	177,451	423
353	369	**Revere Copper & Brass** (New York)	820,851	473,756	380	9,356	441	188,717	414
354	351	**Champion Spark Plug** (Toledo)	818.552	625,993	333	30,345	347	384,330	296
355	365	**Monfort of Colorado** (Greeley, Colo.)[19]	816,563	150,336	493	16,007**	420	36,733	493
356	368	**Tecumseh Products** (Tecumseh, Mich.)	815.743	442,324	393	59.150	262	341,954	312
357	400	**Hart Schaffner & Marx** (Chicago)[29]	815,560	464,874	386	27,410	363	245,465	368
358	383	**Ball** (Muncie, Ind.)	815,182	481,660	377	29,246	354	203,577	401
359	355	**Trane** (La Crosse, Wis.)	807,438	539,726	357	37,240	325	272,201	351
360	376	**G. Heileman Brewing** (La Crosse, Wis.)	807,042	321,213	461	40,230	314	158,929	437
361	363	**Bangor Punta** (Greenwich, Conn.)[9]	799,995	551,454	351	44,182	305	231,061	378
362	390	**Outboard Marine** (Waukegan, Ill.)[9]	795.595	604,004	338	26.949	370	294,338	337
363	336	**Intel** (Santa Clara, Calif.)	788,676	871,517	281	27,359	365	487,817	250
364	380	**Dayco** (Dayton, Ohio)[12]	786,957	475,810	378	(2,678)‡	461	140,688	449
365	354	**Sybron** (Rochester, N.Y.)	785,186¶	529,850	361	27,606	362	253,780	363
366	388	**A.O. Smith** (Milwaukee)	783.749	459,656	387	5,421	452	210,842	393
367	366	**Vulcan Materials** (Birmingham, Ala.)	783,290	676,625	324	78,244	226	405,021	284
368	384	**Brockway Glass** (Brockway, Pa.)	780,172	426.853	401	15,404	422	214,921	389
369	372	**Southwest Forest Industries** (Phoenix)	779,461	783,466	300	18,420**	409	256,936	360
370	444	**Tyler** (Dallas)	770,889	451,204	390	32,045**	337	143,464	447
371	361	**Figgie International** (Willoughby, Ohio)[41]	769,894	475,469	379	25,690	378	175,729	425
372	391	**Miles Laboratories** (Elkhart, Ind.)[42]	769.606	684,412	323	1,465‡	458	304,915	331
373	364	**Arcata** (Menlo Park, Calif.)[6]	762,991	716,176	312	57,334	265	288,666	343
374	470	**National Cooperative Refinery Assoc.** (McPherson, Kans.)[6]	757,973	405,050	417	N.A.[23]		120,000	459
375	406	**Washington Post** (Washington)	753,447	458,197	388	32,710	336	213,393	390
376	346	**Hoover** (North Canton, Ohio)	749,919	449,721	391	(18,778)	470	193,046	408
377	411	**Moore McCormack Resources** (Stamford, Conn.)	747,400	978,117	261	51,393	284	342,816	311
378	417	**VF** (Wyomissing, Pa.)	746,265	399,541	422	52,205	279	242,423	370
379	409	**Data General** (Westboro, Mass.)[9]	736,872	718,597	311	50,663**	285	382,249	298
380	467	**Trinity Industries** (Dallas)[13]	736,104	376,636	435	46,641	298	141,951	448
381	503	**Geosource** (Houston)[9]	730,731	532,789	359	58,551	263	227,081	380
382	429	**Dean Foods** (Franklin Park, Ill.)	728,643	190,888	491	16,155	419	77,206	481
383	399	**Thiokol** (Newtown, Pa.)	728,515	467,731	383	37,112	327	251,685	365
384	396	**Dow Corning** (Midland, Mich.)	721,861	787,088	299	75,938	231	422,238	280
385	427	**McLouth Steel** (Detroit)	720,500[43]	400,000[43]	421	(40,000)[43]	477	80,000[43]	478
386	397	**Bemis** (Minneapolis)	719,008	392,978	423	17,766	412	178,426	422
387	339	**Genesco** (Nashville)[18]	715,867	379.649	431	18,063**	410	60.435	484
388	381	**Saxon Industries** (New York)	714,900[43]	N.A.		N.A.		N.A.	
389	414	**Clorox** (Oakland, Calif.)[6]	714,023	415,993	406	38,083	322	250,352	366
390	430	**Dorchester Gas** (Dallas)[19]	712,033	409,241	408	31,287	340	149,242	441
391	428	**EG&G** (Wellesley, Mass.)	704,161	225,349	486	34,119	333	137,738	450
392	386	**Ferro** (Cleveland)	702,213	392,271	424	25,503	379	225,307	382
393	412	**Bell & Howell** (Chicago)	701,488	408,911	409	21,627**	397	184,752	415
394	387	**Signode** (Glenview, Ill.)	700,252	484,053	375	36,682	329	328,340	320
395	495	**Mitchell Energy & Development** (The Woodlands, Tex.)[30]	696,044	1,180,144	228	100,835	185	285,511	345
396	394	**Purex Industries** (Lakewood, Calif.)[6]	692,579	349,650	442	26,709	371	211,585	392
397	378	**Pabst Brewing** (Milwaukee)	691,864*	404,045	419	(23,536)	473	254,835	361
398	410	**Insilco** (Meriden, Conn.)	684,931	594,906	341	34,007	334	232,620	377
399	420	**DPF** (Hartsdale, N.Y.)[21,44]	681,207¶	179,042	492	(24,364)**	474	46,819	490
400	423	**Varian Associates** (Palo Alto, Calif.)[9]	680,057	495,132	372	(3,554)	463	192,050	409

●Not among the 500 or the Second 500 in 1980.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

N.A. Not available.

*Does not include excise taxes; see the explanation of "sales" on page 280.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			EARNINGS PER SHARE GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
6,329	422	13.2	17	19.6	80	2.57	2.05	0.26	25.75	56	(7.02)	279	18.36	57	28
5,664	434	2.9	368	13.2	269	4.16	4.02	0.96	15.79	105	(31.63)	422	—		20
6,507†	417	1.1	437	5.0	435	1.64	3.82	0.26‡	20.22	98	(7.44)	282	1.87	370	33
13,500	284	3.7	311	7.9	399	0.79	0.96	0.93	(1.62)	395	(7.78)	283	(1.73)	410	36
2,100	486	2.0	415	43.6	3	3.23**	(4.82)	0.15	35.93	26	5.78	194	(5.70)	433	20
8,040†	387	7.3	96	17.3	136	10.81	7.49	3.36	12.40	230	17.09	140	7.24	259	45
21,500	200	3.4	332	11.2	330	3.16	2.63	1.18	10.35	276	69.09	11	4.23	322	23
10,573	329	3.6	317	14.4	224	5.51	4.77	N.A.	—		31.44	59	—		34
10,700	325	4.6	243	13.7	247	3.65	3.32	1.51	9.23	299	40.59	37	1.84	371	45
5,700	431	5.0	215	25.3	23	3.05	2.65	0.56**	18.47	122	12.11	162	20.61	38	49
11,400	315	5.5	171	19.1	93	6.06	4.55	0.15‡	44.76	14	(11.59)	315	12.63	136	41
10,400	334	3.4	331	9.2	382	3.22	0.28	2.64	1.26	385	76.59	7	(2.50)	416	47
16,800	242	3.5	323	5.6	430	0.61	2.21	0.03**	35.15	28	(44.10)	457	30.26	2	36
10,600	327	—		—		(0.49)‡	1.61	1.13‡	—		3.77	209	3.31	348	30
14,466†	274	3.5	321	10.9	341	2.53	2.15	1.48	5.51	353	29.52	67	(1.27)	404	38
10,251†	339	0.7	446	2.6	451	1.11	(0.35)	2.26‡	(6.86)	407	(3.06)	258	0.17	390	40
5,937	429	10.0	44	19.3	89	6.76	6.04	0.81‡	23.64	65	34.61	53	21.09	33	28
11,500	313	2.0	413	7.2	410	2.07	2.42	1.81	1.35	382	12.12	161	4.89	302	32
6,600	415	2.4	401	7.2	409	1.40**	3.21	1.21	1.47	381	(30.84)	420	1.13	379	26
10,300	336	4.2	281	22.3	35	3.41**	1.41	0.63	18.40	123	49.15	24	16.54	78	33
15,400	261	3.3	337	14.6	216	4.03	3.20	0.70	19.13	113	(11.48)	314	9.86	195	45
9,249	357	0.2	457	0.5	457	N.A.	N.A.	N.A.	—		—		—		42
13,200	288	7.5	90	19.9	74	7.71	4.25	(1.72)‡	—		30.81	61	10.10	188	27
500	497	—		—		N.A.	N.A.	N.A.	—		—		—		29
5,400	436	4.3	267	15.3	200	2.32	2.44	0.66	13.40	212	39.78	40	19.19	51	27
16,460	245	—		—		(1.53)	2.46	1.64	—		(17.82)	360	(4.52)	429	36
4,600	455	6.9	109	15.0	207	6.01	5.50	0.20	40.53	21	(10.72)	306	29.52	6	10
19,000	221	7.0	106	21.5	45	6.46	5.15	1.54	15.42	170	57.98	18	9.81	197	23
14,625	270	6.9	110	13.3	265	4.78**	5.20	0.24	34.87	29	(18.41)	365	11.46	160	44
7,500	392	6.3	130	32.9	7	2.95	1.63	0.19	31.55	37	(34.61)	436	26.79	9	37
10,000	345	8.0	78	25.8	21	4.06	2.77	N.A.	—		(28.73)	412	—		38
3,782	468	2.2	406	20.9	55	2.67	2.07	0.36	22.19	80	7.27	185	24.22	16	20
8,889	366	5.1	203	14.7	212	3.20	2.80	0.58	18.62	118	(2.45)	252	18.91	54	28
6,046†	427	10.5	35	18.0	117	N.A.	N.A.	N.A.	—		—		—		28
N.A.		—		—		(7.37)[43]	(10.51)	(1.66)	—		(59.57)	467	(10.74)	446	33
8,714	369	2.5	391	10.0	366	4.70	3.85	1.38	13.04	217	(3.80)	262	10.00	191	26
18,000	226	2.5	385	29.9	13	1.16**	0.02	1.02‡	1.29	384	27.16	77	(13.34)	451	23
N.A.		—		—		N.A.	0.76	(0.03)‡	—		(33.24)	432	(13.62)	452	26
5,200	443	5.3	183	15.2	203	1.66	1.44	0.84	7.05	333	19.32	122	(4.41)	426	28
1,300	492	4.4	261	21.0	54	1.72	1.92	0.09**	34.32	31	(36.32)	442	25.25	10	29
18,000	227	4.8	227	24.8	25	1.21	0.97	0.13	24.99	60	(8.31)	289	14.23	105	38
9,120	360	3.6	314	11.3	325	3.30	3.77	1.45	8.57	306	38.23	47	7.36	255	28
11,224	317	3.1	350	11.7	309	3.83**	4.69	2.46	4.53	366	(32.06)	427	(6.34)	438	38
6,677	413	5.2	192	11.2	329	4.57	4.86	2.01	8.56	307	1.46	222	3.82	336	34
3,075	476	14.5	11	35.3	6	2.10	1.27	N.A.	—		(45.79)	459	—		10
6,300	423	3.9	303	12.6	286	2.36	2.34	0.93‡	9.76	290	70.83	10	10.53	180	43
4,000	465	—		—		(2.88)	1.55	2.66	—		5.36	198	(11.29)	447	49
9,200	358	5.0	218	14.6	215	2.20	2.25	0.75	11.36	256	(17.31)	355	8.73	223	28
12,500	297	—		—		(5.39)**	1.64	1.37	—		68.50	12	0.35	387	20
12,800	292	—		—		(0.45)	2.77	(0.94)‡	—		9.39	169	9.78	198	36

[41] Name changed from A-T-O June 1, 1981.

[42] Wholly owned by Bayer AG.

[43] FORTUNE estimate.

[44] Name changed to Interstate Bakeries November 16, 1981.

THE 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
401	421	**Kane-Miller** (Tarrytown, N.Y.)	676,246	196,423	489	4,288	454	85,709	470
402	415	**Magic Chef** (Cleveland, Tenn.)[6]	674,274	368,908	437	16,270	418	160,707	434
403	268	**GAF** (New York)	672,514	559,760	348	26,060	376	134,687	452
404	422	**United Merchants & Manufacturers** (New York)[6]	669,564	472,935	381	(2,873)**	462	57,325	486
405	449	**National Starch & Chemical** (Bridgewater, N.J.)[36]	668,372	405,051	416	41,444	311	254,053	362
406	375	**Cone Mills** (Greensboro, N.C.)	667,516	431,013	400	33,721	335	340,747	313
407	426	**Nalco Chemical** (Oak Brook, Ill.)	666,591	466,175	385	81,209	219	335,974	315
408	454	**McCormick** (Hunt Valley, Md.)[29]	659,817	364,903	438	29,924	350	173,726	428
409	418	**Scott & Fetzer** (Lakewood, Ohio)[29]	656,386	405,794	413	29,067	355	184,000	416
410	401	**Nashua** (Nashua, N.H.)	653,901	316,863	464	9,352	442	145,338	445
411	438	**Maryland Cup** (Owings Mills, Md.)[9]	647,042	376,645	434	30,453	345	223,411	384
412	416	**Harnischfeger** (Brookfield, Wis.)[12]	646,100	510,606	368	29,060	356	233,851	376
413	441	**H.H. Robertson** (Pittsburgh)	644,416	337,973	450	27,818	361	134,068	453
414	462	**Dow Jones** (New York)	641,024	532,075	360	71,390	239	269,663	354
415	371	**Mohasco** (Amsterdam, N.Y.)	640,336	352,368	440	15,204	423	198,301	403
416	425	**Avery International** (Pasadena, Calif.)[29]	637,976	409,847	407	26,549	373	180,382	418
417	431	**Dan River** (Greenville, S.C)	634,777	406,927	412	14,540	425	205,204	398
418	408	**H.K. Porter** (Pittsburgh)	631,064	313,935	465	8,231	445	151,031	440
419	434	**Gerber Products** (Fremont, Mich.)[13]	631,017	358,224	439	30,843‡	344	236,670	375
420	393	**Hyster** (Portland, Ore.)[39]	629,668	486,841	374	43,076	307	306,382	327
421	455	**Economics Laboratory** (St. Paul)[6]	628,638	424,092	404	29,765	351	210,544	394
422	456	**Eagle-Picher Industries** (Cincinnati)[29]	624,208	401,263	420	18,553	408	217,889	387
423	451	**Beckman Instruments** (Fullerton, Calif.)[6]	618,125	638,868	332	36,755	328	310,132	324
424	491	**Copperweld** (Pittsburgh)	616,691	416,371	405	37,221	326	191,050	413
425	360	**Handy & Harman** (New York)	611,166	344,746	447	23,431	389	128,546	454
426	475	**Todd Shipyards** (New York)[13]	610,480	288,288	470	23,028**	393	80,259	477
427	450	**Wyman-Gordon** (Worcester, Mass.)	610,302	384,584	428	57,220	237	242,188	371
428	440	**Wallace Murray** (New York)[45]	609,813	517,851	364	23,801	386	331,460	317
429	447	**Wm. Wrigley Jr.** (Chicago)	607,834	318,809	462	28,431	358	244,525	369
430	474	**Foxboro** (Foxboro, Mass.)	606,870	483,500	376	44,837	301	309,687	325
431	435	**Collins & Aikman** (New York)[11]	603,912	351,846	441	14,405	426	195,440	405
432	424	**M. Lowenstein** (New York)	601,320	333,200	454	17,390	414	159,349	436
433	437	**Bausch & Lomb** (Rochester, N.Y.)	600,176¶	431,073	399	9,929	439	240,035	372
434	468	**Sun Chemical** (New York)	598,776	526,168	362	25,902	377	179,487	420
435	446	**Kellwood** (St. Louis)[25]	590,096	334,828	452	3,549	455	79,498	479
436	432	**Idle Wild Foods** (Worcester, Mass.)[19]	589,146	94,253	497	7,876	447	50,312	488
437	459	**American Hoist & Derrick** (St. Paul)[29]	574,000	455,847	389	20,367	404	195,247	406
438	484	**Capital Cities Communications** (New York)	573,784	697,620	318	80,518	221	443,822	271
439	501	**E-Systems** (Dallas)	572,045	280,414	471	23,837	385	159,387	435
440	446	**Carpenter Technology** (Reading, Pa.)[6]	570,693	381,821	429	44,731	302	277,811	348
441	478	**Dennison Manufacturing** (Framingham, Mass.)	569,701	341,263	448	30,074	348	191,167	412
442	382	**Briggs & Stratton** (Wauwatosa, Wis.)[6]	568,986	334,505	453	25,113	360	237,041	374
443	458	**Stokely-Van Camp** (Indianapolis)[21]	564,957	261,815	476	9,031	444	148,303	442
444	576	**Gates Learjet** (Wichita)	564,890	345,728	446	22,444	396	113,901	462
445	439	**Hoover Universal** (Ann Arbor, Mich.)	564,571	330,711	459	23,234	392	169,917	430
446	445	**Gifford-Hill** (Dallas)	563,257	526,077	363	16,917**	417	183,064	417
447	558	**James River Corp. of Virginia** (Richmond, Va.)[25]	561,318	438,788	395	17,881‡	411	146,107	443
448	535	**Armstrong Rubber** (New Haven, Conn.)[9]	560,458	341,228	449	17,368	415	122,466	457
449	392	**Peabody International** (Stamford, Conn.)[9]	556,311¶	276,231	473	13,577	430	122,327	458
450	481	**Nucor** (Charlotte, N.C.)	544,821	384,782	427	34,729	332	212,376	391

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

N.A. Not available.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

[45] Wholly owned by Household International.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
3,300	471	0.6	451	5.0	434	1.42	1.49	0.71	7.18	329	60.66	16	7.49	252	20
7,610	391	2.4	394	10.1	363	1.72	0.31	0.73‡	8.95	302	17.76	136	(3.50)	424	36
6,500	419	3.9	299	19.3	88	1.62	(17.57)	0.71‡	8.60	305	13.45	153	0.19	389	29
14,000	278	—		—		(0.48)**	(3.32)	2.71	—		(13.42)	332	(14.88)	453	22
4,663	453	6.2	135	16.3	166	N.A.	N.A.	N.A.	—		—		—		28
11,400	316	5.1	208	9.9	369	5.87	8.88	1.01‡	19.24	110	(12.96)	329	17.04	74	22
4,739	452	12.2	20	24.2	28	4.04	3.61	0.86	16.73	144	0.96	225	8.45	229	28
6,500†	420	4.5	250	17.2	138	2.50	1.31	0.56	16.14	157	8.76	176	2.54	357	20
16,618	244	4.4	257	15.8	183	4.01	3.12	1.95	7.48	326	31.71	58	6.12	281	45
6,644	414	1.4	428	6.4	419	2.00	4.60	1.85	0.78	388	(21.24)	380	(5.84)	434	26
11,000†	321	4.7	236	13.6	250	4.52	3.89	1.04	15.83	162	20.81	114	8.12	236	26
6,900	407	4.5	253	12.4	289	2.93	0.53	0.87	12.91	219	(14.10)	341	9.94	192	45
7,914	385	4.3	272	20.7	57	5.94	4.56	1.16	17.74	133	54.79	19	17.05	72	34
5,400	437	11.1	29	26.5	19	2.28	1.90	0.60**	14.28	193	65.31	14	12.81	134	27
12,696	293	2.4	399	7.7	402	2.30	(0.34)	1.89	1.96	379	17.83	135	(6.09)	436	25
7,785	389	4.2	280	14.7	213	2.95	2.72	0.63**	16.69	145	25.47	92	2.05	367	26
14,550	271	2.3	403	7.1	411	2.51	3.42	(0.51)	—		(1.73)	247	10.35	182	22
6,990	406	1.3	432	5.4	431	6.74	9.88	1.34**	17.53	137	25.39	94	20.36	41	33
10,481†	333	4.9	224	13.0	268	3.46‡	3.45	2.19	4.68	363	13.91	152	2.42	360	20
7,352	393	6.8	112	14.1	238	7.14	10.46	1.82	14.65	188	(19.19)	370	10.89	170	45
7,310	397	4.7	234	14.1	233	2.21	2.31	0.68	12.51	226	(14.97)	346	(2.54)	417	43
9,700	351	3.0	357	8.5	392	1.88	2.14	1.01	6.41	344	(23.29)	391	6.27	279	45
11,800	310	5.9	151	11.9	306	1.76	1.83	0.28	20.18	99	25.74	89	17.46	67	38
4,515	456	6.0	145	19.5	86	6.51	3.33	1.34	17.12	140	53.40	21	21.94	28	33
4,627	454	3.8	306	18.2	108	1.71	2.04	0.11**	31.57	36	(36.12)	441	26,19	11	33
10,300†	337	3.8	308	28.7	16	4.49**	5.66**	0.02	71.84	2	18.77	124	14.00	109	37
4,400	458	9.4	52	23.6	31	3.05	1.65	0.16	34.28	32	18.16	129	—		34
9,720	350	3.9	297	7.2	408	N.A.	5.02	1.33	—		—		—		34
6,000	428	4.7	238	11.6	312	3.61	3.90	2.19	5.13	358	18.22	128	5.80	284	20
11,950	309	7.4	93	14.5	218	3.60	2.58	0.68	18.23	129	(8.28)	288	10.50	181	38
10,050	342	2.4	398	7.4	405	1.16	1.32	1.31	(1.21)	393	42.09	35	(3.49)	423	22
12,300	301	2.9	365	10.9	339	5.22	1.47	2.71	6.78	340	99.10	3	2.25	362	22
10,200	340	1.7	419	4.1	441	0.82	4.36	0.68	1.89	380	(12.31)	320	4.03	331	38
6,300	424	4.3	270	14.4	219	3.47	4.52	0.17	35.20	27	17.85	134	11.79	154	28
16,000	252	0.6	452	4.5	439	1.02	0.06	1.81	(5.57)	403	(1.05)	241	(6.33)	437	23
1,500	490	1.3	430	15.7	190	4.43	3.58	1.85**	9.12	300	62.35	15	—		20
7,100	402	3.6	318	10.4	354	3.29	3.41	0.59	18.75	116	(16.89)	353	9.57	203	45
7,070	403	14.0	13	18.1	112	6.12	5.56	2.17**	10.92	263	25.87	87	12.00	150	27
11,771	311	4.2	279	15.0	209	1.67	0.94	0.29	19.13	112	2.26	218	—		36
4,843	450	7.8	84	16.1	172	5.20	5.03	0.47	27.17	48	21.13	112	23.31	19	33
9,000	363	5.3	187	15.7	187	3.05	2.42	0.94	12.49	227	35.55	51	11.14	165	26
8,179	378	4.4	259	10.6	352	1.74	3.39	1.05	5.18	356	9.87	167	7.57	250	45
5,000	445	1.6	421	6.1	423	2.51	3.23	1.74	3.73	372	51.06	23	11.78	155	20
6,841	408	4.0	292	19.7	78	1.95	1.28	(0.51)	—		(11.90)	316	20.07	46	41
6,512	416	4.1	286	13.7	248	2.60	1.90	0.82	12.23	231	23.83	102	8.96	217	34
4,900	449	3.0	354	9.2	380	2.27**	3.22	1.23	6.32	345	26.86	80	7.69	246	32
8,200	377	3.2	344	12.2	300	1.86‡	2.16	N.A.	—		29.00	71	—		26
5,514	435	3.1	348	14.2	231	8.81	(10.17)	2.97	11.49	254	74.62	8	3.48	343	30
5,250	441	2.4	393	11.1	333	1.23	1.66	0.67	6.26	346	(11.96)	317	5.54	289	45
3,700	470	6.4	126	16.4	165	5.02	6.62	0.48	26.46	54	(13.82)	338	29.61	5	33

THE 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
451	460	**American Bakeries** (Chicago)	543,801	123,778	496	(7,690)‡	465	44,341	492
452	466	**Rohr Industries** (Chula Vista, Calif.)[16]	540,950	297,972	467	7,190	449	63,248	472
453	476	**Harcourt Brace Jovanovich** (New York)	539,296	407,425	411	23,755	387	171,950	429
454	471	**Masonite** (Chicago)[19]	537,550	376,746	433	27,116	368	273,657	350
455	473	**Consolidated Papers** (Wisconsin Rapids, Wis.)	536,899	426,464	402	54,663	273	318,866	322
456	488	**Dorsey** (Chattanooga, Tenn.)[46]	533,569	255,053	479	13,581	429	110,881	463
457	480	**Sonoco Products** (Hartsville, S.C.)	533,349	330,767	458	38,491	320	209,571	395
458	●	**L.B. Foster** (Pittsburgh)	532,373	233,000	485	21,042	402	80,415	476
459	413	**Gulf Resources & Chemical** (Houston)	529,454¶	436,788	396	(77,929)	481	105,922	464
460	463	**Fieldcrest Mills** (Eden, N.C.)	526,151	330,805	457	9,512	440	163,328	433
461	490	**Raychem** (Menlo Park, Calif.)[6]	525,398	446,272	392	35,595	331	252,690	364
462	472	**Savannah Foods & Industries** (Savannah, Ga.)	523,899	139,327	495	27,154	367	64,314	482
463	461	**Dexter** (Windsor Locks, Conn.)	523,112	321,665	460	26,473	375	165,374	431
464	611	**M/A-Com** (Burlington, Mass.)[9]	521,223	517,730	365	40,275	313	264,104	356
465	482	**Federal Paper Board** (Montvale, N.J.)	520,347	576,500	346	31,044	343	158,507	438
466	465	**Sheller-Globe** (Toledo)[9]	512,091	346,946	445	18,931	407	145,307	446
467	464	**Midland Cooperatives** (Columbia Heights, Minn.)	511,462	217,021	488	N.A.[23]		58,671	485
468	547	**Oak Industries** (Rancho Bernardo, Calif.)	507,113	609,319	336	30,350	346	262,263	358
469	507	**Titanium Metals Corp. of America** (Pittsburgh)	505,016	241,422	482	74,787	235	82,131	473
470	514	**Deluxe Check Printers** (St. Paul)	504,036	306,243	466	53,423	276	218,814	386
471	546	**Tyson Foods** (Springdale, Ark.)[9]	501,716	218,759	487	2,104	457	46,572	491
472	518	**Brown-Forman Distillers** (Louisville, Ky.)[25]	500,297	511,617	367	67,249	246	329,865	319
473	500	**Fiat-Allis** (Deerfield, Ill.)	497,494¶	348,370	443	(39,975)	476	62,941	483
474	527	**Palm Beach** (Cincinnati)	497,249	242,795	481	13,227	431	77,998	480
475	469	**Bucyrus-Erie** (South Milwaukee, Wis.)	496,362	807,181	295	37,658	323	401,865	286
476	513	**Arvin Industries** (Columbus, Ind.)	495,136	293,402	468	12,424	432	175,484	428
477	502	**Mallinckrodt** (St. Louis)	494,353	389,510	425	39,701	316	292,359	339
478	520	**American Greetings** (Cleveland)[11]	489,213	431,680	398	25,515	374	207,840	396
479	536	**Kerr Glass Manufacturing** (Los Angeles)	485,777	276,933	472	12,007	434	106,680	465
480	499	**Westmoreland Coal** (Philadelphia)	480,291	376,296	436	(14,775)	469	163,505	432
481	489	**Warnaco** (Bridgeport, Conn.)	478,883	268,241	474	21,166	401	118,612	460
482	483	**Chicago Pneumatic Tool** (New York)	478,249	348,337	444	5,723	451	157,797	439
483	494	**Ideal Basic Industries** (Denver)	476,740	988,394	258	44,019	306	395,497	287
484	347	**Belco Petroleum** (New York)	471,655¶	764,502	305	108,762	172	505,300	241
485	419	**Envirotech** (Menlo Park, Calif.)[13]	471,279	332,027	455	(55,987)	479	57,058	487
486	538	**Fort Howard Paper** (Green Bay, Wis.)	471,261	580,715	345	83,050	215	389,855	294
487	443	**Macmillan** (New York)	470,559	336,751	451	10,836	438	191,524	410
488	516	**Northwestern Steel & Wire** (Sterling, Ill.)[16]	468,494	379,109	432	28,130	360	270,153	353
489	559	**Georgia Kraft** (Rome, Ga.)	466,363	544,031	355	37,271	324	216,404	388
490	479	**Frederick & Herrud** (Southfield, Mich.)[21]	465,591	91,430	498	(1,579)	460	25,861	494
491	517	**Rath Packing** (Waterloo, Iowa)[9]	465,434	67,245	499	(9,582)	466	(5,172)	497
492	552	**Research-Cottrell** (Bedminster, N.J.)[12]	465,266	289,011	469	11,593	437	101,586	468
493	512	**Ampco-Pittsburgh** (Pittsburgh)	463,290	331,411	456	12,240	433	97,628	469
494	509	**Barnes Group** (Bristol, Conn.)	463,261	264,548	475	5,041	453	136,745	451
495	608	**Marion** (Mobile, Ala.)[38]	460,690	259,641	477	23,719	388	81,079	475
496	523	**Knudsen** (Los Angeles)	460,329	146,015	494	6,940	450	48,256	489
497	508	**Ceco** (Oak Brook, Ill.)	456,647	233,899	484	13,877	427	126,609	455
498	534	**Illinois Tool Works** (Chicago)	455,520	381,771	430	44,348	303	286,134	344
499	510	**Riegel Textile** (Greenville, S.C.)[9]	455,335	259,209	478	22,963	394	145,499	444
500	522	**Shaklee** (San Francisco)[9]	454,522	191,670	490	24,543	383	105,601	466
		TOTALS	1,773,381,212	1,282,828,236		84,223,057		587,444,083	

●Not amor the 500 or the Second 500 in 1980.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 280.

N.A. Not available.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 280.

†Average for the year; see the reference to "employees" on page 280.

‡Reflects an extraordinary charge of at least 10%; see the explanations of net income" and "earnings per share" on page 280.

[46] Figures are for fiscal year ending August 31, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF SALES		STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		1971-81 AVERAGE		INDUSTRY
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
8,500	371	—		—		(3.33)†	0.77	(1.08)‡	—		(0.08)	231	7.83	244	20
8,500	372	1.3	431	8.6	388	1.21	0.14	1.12	0.78	389	(5.65)	272	0.10	391	41
8,100	380	4.4	260	13.8	244	2.70	2.78	1.18	8.63	304	12.63	158	4.01	332	27
7,250	399	5.0	209	9.9	367	2.01	2.19	1.29	4.53	365	(4.73)	268	1.73	372	26
5,239†	442	10.2	40	17.1	143	5.05	4.91	0.48	26.53	52	(12.40)	322	25.18	15	26
6,400	421	2.5	383	12.2	299	3.50	2.68	1.54	8.56	308	4.55	205	4.32	319	30
8,259	375	7.2	97	18.4	104	3.49	2.90	0.72	17.10	141	43.71	33	13.71	117	26
1,799	487	4.0	294	26.2	20	2.80	2.56	N.A.	—		—		—		45
2,800	478	—		—		(8.80)	2.66	(5.55)‡	—		(28.97)	413	13.24	126	33
11,736	312	1.8	418	5.6	426	2.49	5.18	2.99**	(1.81)	397	(3.46)	260	3.77	337	22
8,065	384	8.6	115	14.1	236	4.01	4.22	0.01	82.10	1	(19.68)	372	11.69	156	36
962	494	5.2	195	42.2	4	7.05	2.12	1.15	19.88	102	109.51	2	12.01	148	20
5,400	439	5.1	206	16.0	177	2.87	2.80	0.54	18.18	128	(20.16)	374	10.78	175	28
8,096	382	7.7	87	15.2	202	1.05	0.77	0.13	23.23	71	(21.04)	379	22.73	23	36
4,400	459	6.0	149	19.6	81	4.61	3.95	1.24	14.03	197	(8.63)	292	13.39	122	26
9,299	355	3.7	312	13.0	269	2.67	(3.59)	0.98	10.54	272	110.05	1	5.03	300	40
1,202	493	—		—		N.A.	N.A.	N.A.	—		—		—		29
13,529	283	6.0	148	11.6	314	2.23	1.85	0.22	26.06	55	38.25	46	29.69	4	36
4,496	457	14.8	9	91.1	1	N.A.	N.A.	N.A.	—		—		—		33
9,751	348	10.6	32	24.4	27	2.33	1.95	0.46	17.61	135	8.47	178	9.75	201	27
8,100	381	0.4	454	4.5	438	0.55	0.30	0.19**	11.21	258	(18.38)	364	17.83	61	20
2,420	483	13.4	16	20.4	65	5.31	3.97	1.14	16.63	148	33.68	55	13.43	121	49
3,801†	467	—		—		N.A.	N.A.	N.A.	—		—		—		45
9,000	362	2.7	375	17.0	149	3.30	3.56	0.09	43.36	16	48.30	26	17.96	60	23
6,733	412	7.6	88	9.4	377	1.84	2.36	0.69	10.31	277	(30.44)	417	8.61	225	45
8,146	379	2.5	386	7.1	412	1.64	0.92	0.99	5.18	357	19.58	120	4.59	312	40
5,089	444	8.0	74	13.6	252	2.79	2.55	0.60	16.61	149	29.01	70	10.57	179	28
14,858	266	5.4	178	12.8	284	1.94	1.88	0.75	9.97	287	79.61	5	(2.65)	418	27
5,500	436	2.5	390	11.3	326	2.12	2.23**	N.A.	—		39.56	41	—		32
4,202	462	—		—		(2.17)	0.05	0.65	—		1.09	224	8.25	233	10
10,560	330	4.4	258	17.8	121	4.88	3.87	1.64	11.52	253	78.87	6	8.91	218	23
7,311	396	1.2	435	3.6	445	1.17	2.44	2.35	(6.74)	405	12.74	156	(0.28)	398	45
4,189	464	9.2	54	11.1	332	3.24	3.93	1.22	10.26	278	(10.18)	302	9.27	207	32
1,586	489	23.1	3	21.5	46	4.53	3.22	.42‡	26.85	51	(14.19)	342	21.30	31	10
6,754[43]	411	—		—		(12.29)	(3.30)	1.04	—		14.46	149	(5.67)	432	45
3,844	466	17.6	6	21.3	50	3.08	2.55	.44	21.48	87	48.44	25	18.87	55	26
6,200	426	2.3	402	5.7	429	0.84	(0.77)	.67	2.29	377	23.68	103	8.25	232	27
3,717	469	6.0	147	10.4	355	3.75	3.03	2.33	4.87	360	23.16	105	3.91	335	33
3,215	472	8.0	79	17.2	139	N.A.	N.A.	N.A.	—		—		—		26
2,750	480	—		—		(0.45)	2.07	0.83	—		5.93	192	2.21	363	20
2,928	477	—		—		(4.93)	2.15**	6.92**	—		—		—		20
3,100	475	2.5	388	11.4	321	2.21	1.66	0.99	6.36	311	0.48	227	(11.80)	448	45
5,621	432	2.6	376	12.5	288	3.18	3.92	0.38	23.67	64	(35.03)	438	15.68	88	34
7,040	404	1.1	438	3.7	444	0.71	3.51	0.68	0.43	390	(12.57)	323	12.59	138	34
397	498	5.1	199	29.3	14	2.18	1.77	(.31)	—		(56.50)	466	25.95	12	29
2,220	484	1.5	426	14.4	222	2.55	2.46	1.28	7.14	330	0.06	229	5.14	298	20
7,347†	394	3.0	351	11.0	337	4.00	4.57	2.31	5.64	352	19.41	121	1.45	373	34
7,200	401	9.7	46	15.5	194	3.62	3.62	1.01	13.62	204	19.14	123	4.16	325	34
8,900	364	5.0	210	15.8	184	6.09	4.73	0.74	23.46	68	1.93	220	14.05	108	22
1,500	491	5.4	180	23.2	33	3.85	1.92	N.A.	—		(14.66)	344	—		42
15,635,041															

NOTES TO THE FORTUNE DIRECTORY

SALES include service and rental revenues but exclude dividends, interest, and other non-operating revenues. All companies on the list must have derived more than 50% of their sales from manufacturing and/or mining. Sales of subsidiaries are included when they are consolidated; sales from discontinued operations are included when these figures are published. When the sales are at least 10% higher for this reason, there is a symbol (¶) next to the sales figure. All figures are for the year ending December 31, 1981, unless otherwise noted. Sales figures do not include excise taxes collected by the manufacturer, and so the figures for some corporations—most of which sell gasoline, liquor, or tobacco—may be lower than those published by the corporations themselves. When they are at least 5% lower for this reason, there is an asterisk (*) next to the sales figures.

ASSETS are those shown at the company's year-end.

NET INCOME is shown after taxes and after extraordinary credits or charges when any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss.

STOCKHOLDERS' EQUITY is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded when its redemption is either mandatory or outside the control of the company, except in the case of cooperatives.

EMPLOYEES: The figure shown is a year-end total except when it is followed by a dagger (†), in which case it is an average for the year.

EARNINGS PER SHARE: For all companies, the figures shown are the "primary" earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common-stock equivalents outstanding during the year. "Common-stock equivalents" generally include (a) convertible securities whose cash yield is less than two-thirds of the prime rate at the time the securities were issued and (b) options and warrants when the effect of their inclusion in the computation would reduce the "primary" earning per share. Per-share earnings for 1980 and 1981 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1971. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of a least 10%. Results are listed as not available (N.A.) where the companies are cooperatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published in 1971. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1971 or 1981.

TOTAL RETURN TO INVESTORS includes both price appreciation and dividend yield, i.e., to an investor in the company's stock. The figures shown assume sales at the end of 1981 of stock owned at the end of 1971 or 1980. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spin-offs were reinvested at the end of the year in which they were received. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) where shares are not publicly traded or traded on only a limited basis. Where companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total-return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded. Where corporations were substantially reorganized—e.g., because of mergers—the predecessor companies used in calculating total return are the same as those cited in the footnotes to the earnings-per-share figures.

INDUSTRY CODE numbers used in the directory indicate which industry represents the greatest volume of industrial sales for each company. The numbers refer to the industry groups below, which are based on categories established by the U.S. Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office. They are the same industry groups as those shown in the tables beginning on this page. The median figures in the tables refer only to results of companies among the 500; no attempt has been made to calculate medians in groups with fewer than four companies.

CODE NO.	INDUSTRY
10	Mining, crude-oil production
20	Food
21	Tobacco
22	Textiles, vinyl flooring
23	Apparel
25	Furniture
26	Paper, fiber, and wood products
27	Publishing, printing
28	Chemicals
29	Petroleum refining
30	Rubber, plastic products
31	Leather
32	Glass, concrete, abrasives, gypsum
33	Metal manufacturing
34	Metal products
36	Electronics, appliances
37	Shipbuilding, railroad and transportation equipment
38	Measuring, scientific, photographic equipment
40	Motor vehicles
41	Aerospace
42	Pharmaceuticals
43	Soaps, cosmetics
44	Office equipment (includes computers)
45	Industrial and farm equipment
46	Jewelry, silverware
47	Musical instruments, toys, sporting goods
49	Beverages

WHO DID BEST (AND WORST) AMONG THE 500

TOTAL RETURN TO INVESTORS, 1981

THE TEN HIGHEST

	SALES RANK	
Sheller-Globe	466	110.05%
Savannah Foods & Industries	462	109.51
Lowenstein (M.)	432	99.10
Northwest Industries	105	94.69
American Greetings	478	79.61
Warnaco	461	78.87
Outboard Marine	362	76.59
Armstrong Rubber	448	74.62
Sunbeam	237	74.60
Purex Industries	396	70.83

THE FIVE LOWEST

AM International	342	−73.41%
Commonwealth Oil Refining	314	−71.05
International Harvester	46	−71.03
Fairchild Industries	262	−60.23
McLouth Steel	385	−59.57

THE INDUSTRY MEDIANS

Apparel	37.73%
Beverages	31.85
Musical instruments, toys, sporting goods	27.06
Soaps, cosmetics	22.32
Rubber, plastic products	21.09
Food	18.15
Textiles, vinyl flooring	15.65
Publishing, printing	15.53
Metal products	8.06
Tobacco	5.95
Glass, concrete, abrasives, gypsum	3.40
Pharmaceuticals	3.07
Electronics, appliances	.39
Chemicals	−.95
Paper, fiber, and wood products	−4.13
Motor vehicles	−4.45
Metal manufacturing	−6.08
Shipbuilding, railroad and transportation equipment	−6.24
industrial and farm equipment	−10.29
Measuring, scientific, photographic equipment	−10.38
Office equipment (includes computers)	−18.61
Aerospace	−21.93
Petroleum refining	−23.17
Mining, crude-oil production	−23.90
Leather	N.A.
Furniture	N.A.
Jewelry, silverware	N.A.
All industries	**−.35**

TOTAL RETURN TO INVESTORS, 1971-81

THE TEN HIGHEST

	SALES RANK	
Teledyne	134	31.60%
Intel	363	30.26
NVF	308	30.06
Oak Industries	468	29.69
Nucor	450	29.61
Moore McCormack Resources	377	29.52
Cooper Industries	142	27.76
Northrop	194	27.21
Trinity Industries	380	26.79
Dorchester Gas	390	26.25

THE FIVE LOWEST

Commonwealth Oil Refining	314	−22.20%
AM International	342	−17.32
Chrysler	26	−15.24
United Merchants & Manufacturing	404	−14.88
Saxon Industries	388	−13.62

THE INDUSTRY MEDIANS

Aerospace	15.86%
Mining, crude-oil production	15.43
Shipbuilding, railroad and transportation equipment	14.00
Petroleum refining	13.44
Tobacco	13.33
Metal manufacturing	11.93
Publishing, printing	9.75
Metal products	8.96
Industrial and farm equipment	8.91
Chemicals	8.58
Paper, fiber, and wood products	8.12
Food	7.49
Electronics, appliances	6.91
Measuring, scientific, photographic equipment	6.32
Glass, concrete, abrasives, gypsum	5.85
Apparel	5.76
Pharmaceuticals	5.30
Office equipment (includes computers)	4.88
Motor vehicles	4.81
Textiles, vinyl flooring	3.77
Rubber, plastic products	3.40
Soaps, cosmetics	2.75
Beverages	1.32
Musical instruments, toys, sporting goods	−2.50
Leather	N.A.
Furniture	N.A.
Jewelry, silverware	N.A.
All industries	**8.52**

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Titanium Metals	469	91.1%
Joseph E. Seagram & Sons	238	59.4
Monfort of Colorado	355	43.6
Savannah Foods & Industries	462	42.2
Northwest Industries	105	41.1
Mitchell Energy & Development	395	35.3
Trinity Industries	380	32.9
Standard Oil (Ohio)	21	32.6
Bendix	86	30.9
SmithKline	195	30.2

THE INDUSTRY MEDIANS

	1981	1980
Tobacco	19.5%	19.8%
Beverages	19.2	15.6
Pharmaceuticals	18.0	17.9
Mining, crude-oil production	17.6	21.0
Publishing, printing	16.4	15.9
Petroleum refining	16.4	19.4
Apparel	16.2	12.8
Soaps, cosmetics	15.8	16.9
Measuring, scientific, photographic equipment	15.6	17.1
Aerospace	15.0	16.2
Food	14.4	14.5
Shipbuilding, railroad and transportation equipment	14.4	14.4
Electronics, appliances	14.3	16.2
Metal products	14.1	15.3
Industrial and farm equipment	13.9	13.3
Chemicals	13.5	13.9
Office equipment (includes computers)	13.3	15.1
Metal manufacturing	12.4	12.9
Paper, fiber, and wood products	12.0	12.8
Rubber, plastic products	10.4	5.0
Glass, concrete, abrasives, gypsum	9.6	11.3
Musical instruments, toys, sporting goods	9.2	12.6
Textiles, vinyl flooring	7.8	8.1
Motor vehicles	7.6	8.1
Leather	N.A.	N.A.
Furniture	N.A.	N.A.
Jewelry, silverware	N.A.	N.A.
All industries	**13.8**	**14.4**

RETURN ON SALES

THE TEN HIGHEST

	SALES RANK	
Joseph E. Seagram & Sons	238	100.5%
Newmont Mining	333	41.6
Belco Petroleum	484	23.1
Freeport McMoRan	346	19.1
SmithKline	195	18.6
Fort Howard Paper	486	17.6
Superior Oil	187	17.6
Natomas	232	15.1
Titanium Metals	469	14.8
Hughes Tool	213	14.5

THE INDUSTRY MEDIANS

	1981	1980
Mining, crude-oil production	11.7%	9.2%
Pharmaceuticals	9.1	9.1
Tobacco	7.9	7.9
Publishing, printing	7.1	8.2
Measuring, scientific, photographic equipment	6.9	6.9
Office equipment (includes computers)	6.1	6.0
Beverages	5.5	4.8
Chemicals	5.4	5.2
Paper, fiber, and wood products	5.0	5.0
Soaps, cosmetics	5.0	5.9
Industrial and farm equipment	4.6	4.3
Shipbuilding, railroad and transportation equipment	4.5	4.1
Metal manufacturing	4.4	4.1
Petroleum refining	4.4	5.5
Metal products	4.4	4.7
Electronics, appliances	4.4	5.3
Aerospace	4.0	4.1
Apparel	3.4	3.6
Musical instruments, toys, sporting goods	3.4	3.7
Food	3.3	3.0
Glass, concrete, abrasives, gypsum	3.1	3.7
Rubber, plastic products	3.0	1.5
Textiles, vinyl flooring	[illegible]	2.8
Motor vehicles	2.6	2.6
Leather	N.A.	N.A.
Furniture	N.A.	N.A.
Jewelry, silverware	N.A.	
All industries	**4.6**	**4.8**

CHANGES IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Nabisco Brands	60	126.5%
Cooper Industries	142	70.2
Du Pont	12	67.1
Penn Central	123	66.3
Geosource	381	65.6
ConAgra	255	63.3
M/A-Com	464	61.6
Gates Learjet	444	60.9
Wang Laboratories	341	57.6
Warner Communications	135	57.2

THE TEN BIGGEST DECREASES

Esmark	127	45.7%
GAF	403	45.4
Belco Petroleum	484	43.2
Envirotech	485	24.9
Commonwealth Oil Refining	314	21.1
Briggs & Stratton	442	19.7
Handy & Harman	425	19.7
Peabody International	449	18.7
Gulf Resources & Chemical	459	17.1
Macmillan	487	16.9

THE INDUSTRY MEDIANS

Mining, crude-oil production	19.5%
Petroleum refining	15.3
Publishing, printing	14.2
Musical instruments, toys, sporting goods	13.7
Office equipment (includes computers)	12.7
Aerospace	10.9
Measuring, scientific, photographic equipment	9.6
Tobacco	9.1
Rubber, plastic products	9.1
Apparel	8.9
Electronics, appliances	8.6
Food	8.5
Pharmaceuticals	8.1
Chemicals	7.9
Metal manufacturing	7.2
Metal products	6.8
Beverages	6.8
Motor vehicles	6.7
Soaps, cosmetics	6.7
Industrial and farm equipment	6.6
Shipbuilding, railroad and transportation equipment	6.3
Paper, fiber, and wood products	5.8
Textiles, vinyl flooring	4.0
Glass, concrete, abrasives, gypsum	3.9
Leather	N.A.
Furniture	N.A.
Jewelry, silverware	N.A.

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*

	SALES RANK	
Kellwood	435	1,543.1%
Joseph E. Seagram & Sons	238	1,221.4
Outboard Marine	362	1,049.7
Rohr Industries	452	601.5
Harnischfeger	412	513.0
Genesco	387	423.1
Wheeling-Pittsburgh Steel	288	309.3
Springs Mills	329	277.2
Republic Steel	87	272.8
M. Lowenstein	432	256.9

THE TEN BIGGEST DECREASES*

NVF	308	97.0%
Warner-Lambert	119	95.2
Charter	75	84.6
RCA	44	82.9
Crown Central Petroleum	242	82.4
Bausch & Lomb	433	81.0
Miles Laboratories	372	80.3
Esmark	127	80.1
Barnes Group	494	79.2
Asarco	234	78.9

*Listings exclude money losers.

THE INDUSTRY MEDIANS

	INCREASES
Rubber, plastic products	62.0%
Musical instruments, toys, sporting goods	52.8
Apparel	19.1
Aerospace	16.3
Beverages	15.1
Publishing, printing	13.5
Office equipment (includes computers)	13.0
Industrial and farm equipment	12.7
Measuring, scientific, photographic equipment	12.4
Food	10.6
Tobacco	10.2
Chemicals	10.1
Metal products	8.8
Electronics, appliances	8.8
Motor vehicles	8.0
Pharmaceuticals	6.2
Shipbuilding, railroad and transportation equipment	6.2
Metal manufacturing	4.3
Paper, fiber, and wood products	4.0
Mining, crude-oil production	1.6

	DECREASES
Glass, concrete, abrasives, gypsum	15.1%
Petroleum refining	7.6
Textiles, vinyl flooring	3.1
Soaps, cosmetics	1.8
Leather	N.A.
Furniture	N.A.
Jewelry, silverware	N.A.

SALES PER DOLLAR OF STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Commonwealth Oil Refining	314	$89.49
AM International	342	62.13
Lockheed	57	59.25
Monfort of Colorado	355	22.23
Frederick & Herrud	490	18.00
Land O'Lakes	115	15.78
Gold Kist	212	15.58
DPF	399	14.5[illegible]
Mid-American Dairymen	283	13.70
Agway	100	13.49

THE FIVE LOWEST

AMAX	152	$1.10
Superior Oil	187	.96
Belco Petroleum	484	.93
Newmont Mining	333	.69
Joseph E. Seagram & Sons	238	.59

THE INDUSTRY MEDIANS

Shipbuilding, railroad and transportation equipment	$5.05
Food	4.33
Aerospace	4.25
Petroleum refining	4.19
Rubber, plastic products	4.09
Apparel	3.68
Motor vehicles	3.37
Metal products	3.27
Textiles, vinyl flooring	3.13
Electronics, appliances	3.12
Soaps, cosmetics	2.98
Beverages	2.89
Metal manufacturing	2.82
Musical instruments, toys, sporting goods	2.72
Industrial and farm equipment	2.70
Tobacco	2.51
Glass, concrete, abrasives, gypsum	2.50
Chemicals	2.44
Publishing, printing	2.35
Paper, fiber, and wood products	2.31
Measuring, scientific, photographic equipment	2.26
Mining, crude-oil production	2.18
Pharmaceuticals	2.00
Office equipment (includes computers)	1.93
Leather	N.A.
Furniture	N.A.
Jewelry, silverware	N.A.
All industries	**2.97**

SALES PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
National Cooperative Refinery Association	374	$1,515,946
Pacific Resources	299	1,461,981
Commonwealth Oil Refining	314	1,266,139
Marion	495	1,160,428
Tosco	117	1,082,489
Amerada Hess	33	1,041,132
Standard Oil of California	5	1,021,788
American Petrofina	164	910,559
Crown Central Petroleum	242	898,127
Texaco	4	863,625

THE FIVE LOWEST

Kellwood	435	$36,881
Allegheny International	204	36,172
American Greetings	478	32,926
National Semiconductor	287	32,413
General Instrument	349	31,253

THE INDUSTRY MEDIANS

Petroleum refining	$512,868
Mining, crude-oil production	302,784
Beverages	139,272
Chemicals	119,395
Food	114,979
Metal manufacturing	107,165
Paper, fiber, and wood products	102,481
Soaps, cosmetics	97,965
Tobacco	95,286
Pharmaceuticals	81,745
Glass, concrete, abrasives, gypsum	80,963
Rubber, plastic products	78,806
Motor vehicles	78,790
Publishing, printing	77,860
Industrial and farm equipment	76,804
Shipbuilding, railroad and transportation equipment	76,673
Metal products	75,677
Aerospace	70,175
Musical instruments, toys, sporting goods	67,690
Measuring, scientific, photographic equipment	62,499
Electronics, appliances	60,385
Office equipment (includes computers)	54,304
Textiles, vinyl flooring	51,161
Apparel	42,135
Leather	N.A.
Furniture	N.A.
Jewelry, silverware	N.A.
All industries	**86,381**

ASSETS PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
National Cooperative Refinery Association	374	$810,100
Amerada Hess	33	700,452
Superior Oil	187	665,314
Marion	495	654,008
Murphy Oil	167	576,834
Pacific Resources	299	548,816
Standard Oil of California	5	547,122
Shell Oil	13	539,747
Natomas	232	525,025
Getty Oil	23	498,555

THE FIVE LOWEST

VF	378	$21,028
Kellwood	435	20,927
American Bakeries	451	14,562
DPF	399	14,323
EG&G	391	12,519

THE INDUSTRY MEDIANS

Mining, crude-oil production	$383,787
Petroleum refining	314,801
Beverages	95,828
Chemicals	94,299
Paper, fiber, and wood products	92,023
Metal manufacturing	82,380
Tobacco	78,730
Pharmaceuticals	74,388
Glass, concrete, abrasives, gypsum	64,337
Publishing, printing	57,924
Industrial and farm equipment	57,258
Soaps, cosmetics	57,175
Food	56,941
Office equipment (includes computers)	54,858
Metal products	53,151
Shipbuilding, railroad and transportation equipment	52,104
Motor vehicles	51,786
Rubber, plastic products	48,061
Aerospace	46,689
Electronics, appliances	46,216
Measuring, scientific, photographic equipment	45,935
Musical instruments, toys, sporting goods	44,610
Textiles, vinyl flooring	30,227
Apparel	23,278
Leather	N.A.
Furniture	N.A.
Jewelry, silverware	N.A.
All industries	**60,437**

THE MONEY LOSERS

	SALES RANK	LOSS
Ford Motor	6	$1,060,100,000*
Chrysler	26	475,600,000*
Kaiser Steel	310	437,455,000
International Harvester	46	393,128,000*
Lockheed	57	288,800,000
AM International	342	245,051,000
Commonwealth Oil Refining	314	212,309,000*
American Motors	162	136,563,000*
Coastal	59	96,399,000
Gulf Resources & Chemical	459	77,929,000
U.S. Industries	285	62,671,000
Envirotech	484	55,987,000*
Cities Service	39	49,200,000
McLouth Steel	385	40,000,000*
Fiat-Allis	474	39,975,000*
Allis-Chalmers	188	28,841,000
DPF	399	24,364,000
Pabst Brewing	397	23,536,000
J.P. Stevens	189	22,874,000
Jos. Schlitz Brewing	335	20,604,000
Hoover	376	18,778,000
Westmoreland Coal	480	14,775,000
Lever Brothers	281	11,500,000*
CertainTeed	334	10,916,000
Rath Packing	491	9,582,000
American Bakeries	451	7,690,000
Scovill	331	4,534,000
Varian Associates	400	3,554,000
United Merchants & Manufacturers	404	2,873,000*
Dayco	364	2,678,000
Frederick & Herrud	490	1,579,000

*Also lost money in 1980.

Reprints of this year's FORTUNE Directory will be available in September. The directory will include the FORTUNE 500 (from this issue), the Second 500 (published June 14), and the non-industrial "50 Largest" lists (published July 12). Single copies of the reprints are $7 each; 25 to 99 copies, $6 each; 100 or more, $5 each. Please address inquiries and payment to Fortune, Double 500 Directory 1982, P.O. Box 8001, Trenton, N.J. 08650. Payment must accompany order.

ARRIVALS AND DEPARTURES

NEWCOMERS TO THE 500

	SALES RANK
American Greetings	478
American Hoechst	225
Ampco-Pittsburgh	493
Brown-Forman Distillers	472
BASF Wyandotte	307
BATUS	90
Deluxe Check Printers	470
E-Systems	439
Fort Howard Paper	486
L.B. Foster	458
Gates Learjet	444
Georgia Kraft	489
Geosource	381
Illinois Tool Works	498
James River Corp. of Virginia	447
Kerr Glass Manufacturing	479
Knudsen	496
M/A-Com	464
Mallinckrodt	477
Marion	495
Mid-America Dairymen	283
Oak Industries	468
Palm Beach	474
Research-Cottrell	492
Shaklee	500
Titanium Metals Corp. of America	469
Tyson Foods	471

RETURNED TO THE 500*

	SALES RANK
Armstrong Rubber (1977: 489)	448
Arvin Industries (1979: 451)	476
Barnes Group (1979: 480)	494
Ceco (1979: 492)	497
Engelhard (1966: 271)	180
Farmers Union Central Exchange (1973: 443)	265
Foster Wheeler (1977: 207)	220
Natomas (1978: 458)	232
Northwestern Steel & Wire (1979: 458)	488
Rath Packing (1977: 492)	491
Riegel Textile (1968: 450)	499

*Figures in parentheses indicate year and sales rank the last time the company was listed.

DISPLACED FROM THE 500

	1980 SALES RANK
American Broadcasting[1]	168
Ampex[2]	493
Bunker Ramo[3]	486
Cannon Mills[4]	405
Castle & Cooke[1]	210
Clark Oil & Refining[5]	221
Coca-Cola Bottling Co. of N.Y.[6]	477
Columbia Pictures Industries[1]	389
Conoco[7]	14
Consolidated Aluminum[6]	318
Crouse-Hinds[8]	367
CBS[1]	94
Fairmont Foods[1]	453
Fleetwood Enterprises	485
General Host[1]	344
General Refractories	487
GK Technologies[9]	275
Hobart[10]	402
H.P. Hood	452
International Flavors & Fragrances	498
Iowa Beef Processors[11]	81
Kennecott[12]	169
Marley[13]	442
McDonough	497
Memorex[14]	358
Metromedia[1]	496
MCA[1]	256
Norris Industries[15]	436
Oscar Mayer[16]	202
Questor	492
Sperry & Hutchinson[17]	357
St. Joe Minerals[18]	261
Standard Brands[19]	128
Texasgulf[20]	286
Twentieth Century-Fox Film[1]	337
U.S. Filter[21]	334
United Refining[22]	404
White Motor[23]	350

[1] No longer classified as an industrial.

[2] Acquired by Signal Companies (rank: 70) January 15, 1981.

[3] Acquired by Allied (rank: 55) July 1, 1981.

[4] Merged with Pacific Holding March 30, 1982.

[5] Acquired by Apex Oil October 30, 1981.

[6] Figures are no longer made public.

[7] Acquired by Du Pont (rank: 12) September 30, 1981.

[8] Acquired by Cooper Industries (rank: 142) April 29, 1981.

[9] Acquired by Penn Central (rank: 123) May 14, 1981.

[10] Acquired by Dart & Kraft (rank: 29) April 29, 1981.

[11] Acquired by Occidental Petroleum (rank: 18) August 12, 1981.

[12] Acquired by Standard Oil of Ohio (rank: 21) June 4, 1981.

[13] Acquired by Kohlberg Kravis Roberts May 28, 1981.

[14] Acquired by Burroughs (rank: 128) December 3, 1981.

[15] Acquired by Norind Holdings December 8, 1981.

[16] Acquired by General Foods (rank: 52) May 5, 1981.

[17] Acquired by Baldwin-United (1980 rank: 39, in the 50 Largest Diversified Financials) October 12, 1981.

[18] Acquired by Fluor August 3, 1981.

[19] Merged with Nabisco (1980 rank: 152) to form Nabisco Brands (rank: 60) July 6, 1981.

[20] Acquired by Elf Aquitaine (1980 rank: 9, in the 500 Largest Industrials Outside the U.S.) September 28, 1981.

[21] Acquired by Ashland Oil (rank: 35) March 31, 1981.

[22] Acquired by Coral Petroleum January 26, 1981.

[23] In liquidation.

ALPHABETICAL INDEX OF THE 500 LARGEST INDUSTRIALS

COMPANY	RANK
ACF Industries	321
AM International	342
AMAX	152
AMF	245
AMP	274
Abbott Laboratories	172
Agway	100
Air Products & Chemicals	228
Airco	282
Akzona	279
Allegheny International	204
Allied	55
Allis-Chalmers	188
Alumax	284
Aluminum Co. of America	78
Amerada Hess	33
American Bakeries	451
American Brands	96
American Can	81
American Cyanamid	106
American Greetings	478
American Hoechst	225
American Hoist & Derrick	437
American Home Products	93
American Motors	162
American Petrofina	164
American Standard	165
Ampco-Pittsburgh	493
Amstar	197
Amsted Industries	345
Anchor Hocking	319
Anderson Clayton	202
Anheuser-Busch	99
Arcata	373
Archer-Daniels-Midland	107
Armco	51
Armstrong Rubber	448
Armstrong World Industries	256
Arvin Industries	476
Asarco	234
Ashland Oil	35
Atlantic Richfield	10
Avery International	416
Avnet	266
Avon Products	160
BASF Wyandotte	307
BATUS	90
Baker International	185
Ball	358
Bally Manufacturing	339
Bangor Punta	361
Barnes Group	404
Bausch & Lomb	433
Baxter Travenol Laboratories	239
Beatrice Foods	41
Beckman Instruments	423
Becton Dickinson	300
Belco Petroleum	484
Bell & Howell	393
Bemis	386
Bendix	86
Bethlehem Steel	47
Big Three Industries	351
Black & Decker Manufacturing	248
Blue Bell	249
Boeing	31
Boise Cascade	143
Borden	85
Borg-Warner	155
Briggs & Stratton	442
Bristol-Myers	113
Brockway Glass	368
Brown-Forman Distillers	472
Brown Group	263
Brunswick	260
Bucyrus-Erie	475
Burlington Industries	132
Burroughs	128
CBI Industries	326
CF Industries	303
CPC International	89
Cabot	223
Cameron Iron Works	324
Campbell Soup	153
Campbell Taggart	270
Capital Cities Communications	438
Carnation	121
Carpenter Technology	440
Caterpillar Tractor	37
Ceco	497
Celanese	104
Central Soya	199
CertainTeed	334
Cessna Aircraft	302
Champion International	97
Champion Spark Plug	354
Charter	75
Chesebrough-Pond's	236
Chicago Pneumatic Tool	482
Chromalloy American	253
Chrysler	26
Cincinnati Milacron	322
Cities Service	39
Clark Equipment	259
Clorox	389
Cluett Peabody	348
Coastal	59
Coca-Cola	58
Colgate-Palmolive	72
Collins & Aikman	431
Colt Industries	178
Combustion Engineering	102
Commonwealth Oil Refining	314
ConAgra	255
Cone Mills	406
Consolidated Foods	63
Consolidated Papers	455
Continental Group	74
Control Data	144
Cooper Industries	142
Coors (Adolph)	323
Copperweld	424
Corning Glass Works	226
Crane	224
Crown Central Petroleum	242
Crown Cork & Seal	257
Crown Zellerbach	140
Cummins Engine	200
Cyclops	309
DPF	399
Dan River	417
Dana	158
Dart & Kraft	29
Data General	379
Dayco	364
Dean Foods	382
Deere	65
Deluxe Check Printers	470
Dennison Manufacturing	441
Dexter	463
Diamond International	261
Diamond Shamrock	112
Digital Equipment	137
Donnelly (R.R.) & Sons	271
Dorchester Gas	390
Dorsey	456
Dover	311
Dow Chemical	24
Dow Corning	384
Dow Jones	414
Dresser Industries	83
Du Pont (E.I.) de Nemours	12
EG&G	391
Eagle-Picher Industries	422
Eastman Kodak	28
Eaton	139
Economics Laboratory	421
Emerson Electric	118
Emhart	215
Engelhard	180
Envirotech	485
Esmark	127
E-Systems	439
Ethyl	214
Evans Products	243
Ex-Cell-O	292
Exxon	1
FMC	109
Fairchild Industries	262
Farmers Union Central Exchange	265
Farmland Industries	64
Federal Co.	296
Federal-Mogul	347
Federal Paper Board	465
Ferro	392
Fiat-Allis	473
Fieldcrest Mills	460
Figgie International	371
Firestone Tire & Rubber	88
Ford Motor	6
Fort Howard Paper	486
Foster (L.B.)	458
Foster Wheeler	220
Foxboro	430
Frederick & Herrud	490
Freeport-McMoRan	346
Fruehauf	183
GAF	403
GATX	278
Gannett	258
Gates Learjet	444
General Cinema	350
General Dynamics	76
General Electric	11
General Foods	52
General Instrument	349
General Mills	80
General Motors	3
General Signal	219
General Tire & Rubber	163
Genesco	387
Georgia Kraft	489
Georgia-Pacific	67
Geosource	381
Gerber Products	419
Getty Oil	23
Gifford-Hill	446
Gillette	173
Gold Kist	212
Goodrich (B.F.)	138
Goodyear Tire & Rubber	38
Gould	179
Grace (W.R.)	53
Great Northern Nekoosa	240
Greyhound	82
Grumman	203
Gulf Oil	9
Gulf Resources & Chemical	459
Gulf & Western Industries	61
Hammermill Paper	254
Handy & Harman	425
Harcourt Brace Jovanovich	453
Harnischfeger	412
Harris	229
Harsco	286
Hart Schaffner & Marx	357
Heileman (G.) Brewing	360
Heinz (H.J.)	111
Hercules	157
Hershey Foods	244
Heublein	227
Hewlett-Packard	110
Honeywell	69
Hoover	376
Hoover Universal	445
Hormel (Geo. A.)	247
Hughes Tool	213
Hyster	420
IC Industries	92
INTERCO	170
Ideal Basic Industries	483
Idle Wild Foods	436
Illinois Tool Works	498
Ingersoll-Rand	120
Inland Steel	103
Insilco	398
Intel	363
Interlake	313
International Business Machines	8
International Harvester	46
International Minerals & Chemical	196
International Multifoods	298
International Paper	77
International Telephone & Telegraph	14
James River Corp. of Virginia	447
Johnson Controls	291
Johnson & Johnson	68
Joy Manufacturing	297

Most of the figures in this FORTUNE *500 Directory were prepared by reporter Monci Jo Williams, who is responsible for the columns reporting on companies' sales, assets, net income, stockholders' equity, employees, net income as a proportion of sales and of stockholders' equity, and the industry code numbers. Figures on earnings per share and total return to investors were prepared by Claudine Knight.*

Kaiser Aluminum & Chemical	136
Kaiser Steel	310
Kane-Miller	401
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Kellwood	435
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Are the Japanese Rigging the Yen?
The 50 Largest Private Industrial Companies
Sotheby's Lost Art: Management

$3.00

May 31, 1982

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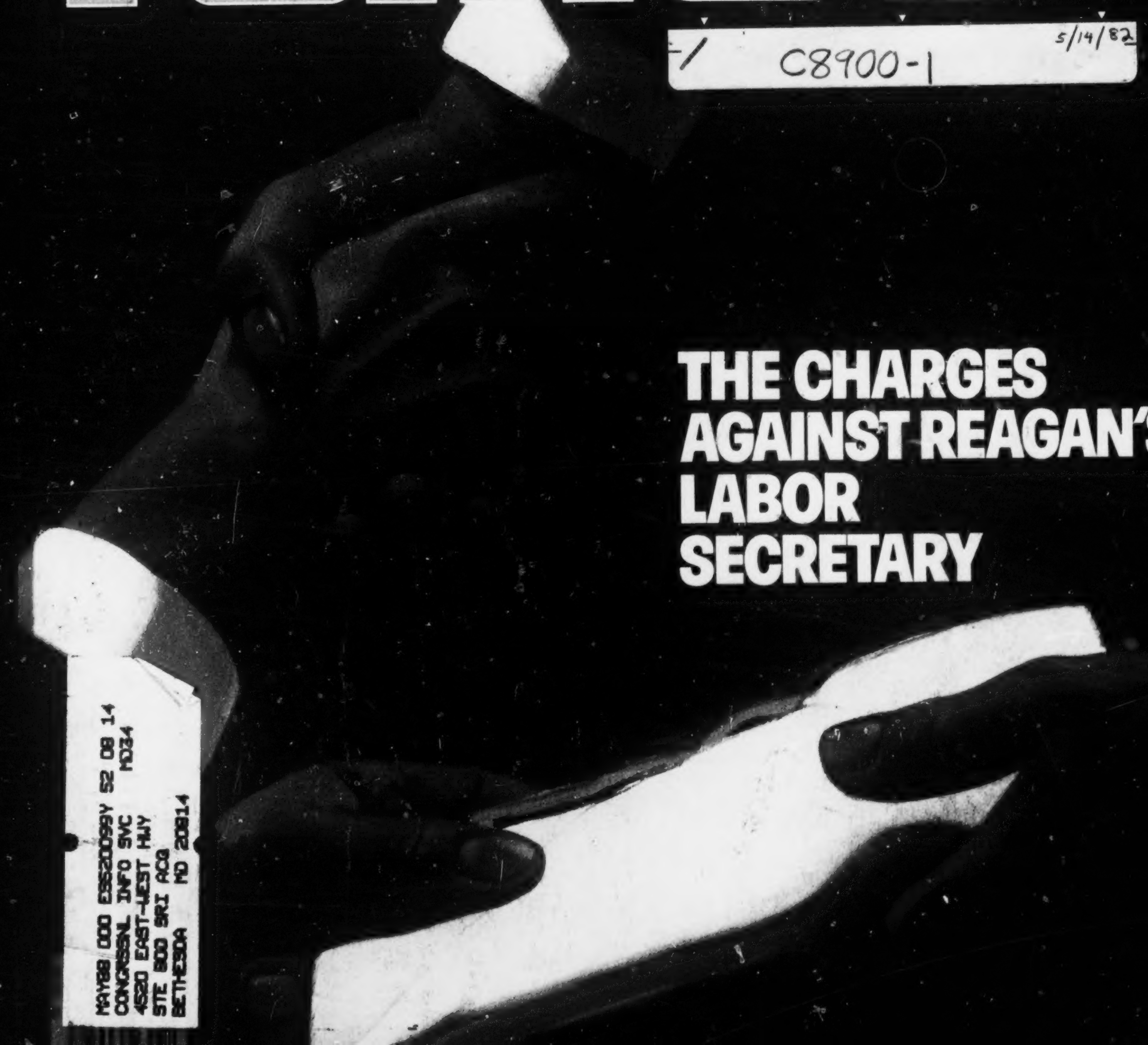

THE CHARGES AGAINST REAGAN'S LABOR SECRETARY

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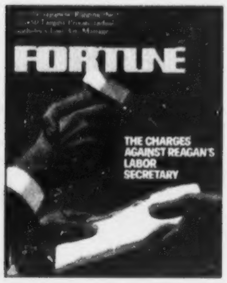
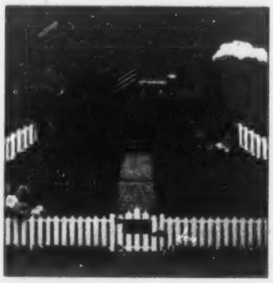


Dennis Luzak's oil painting depicts a symbolic handshake and payoff to a corrupt union official. The cover story begins on page 80.

91 Yen



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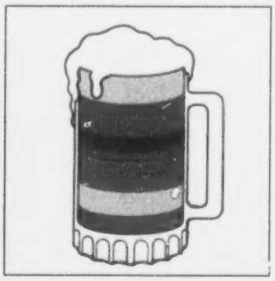

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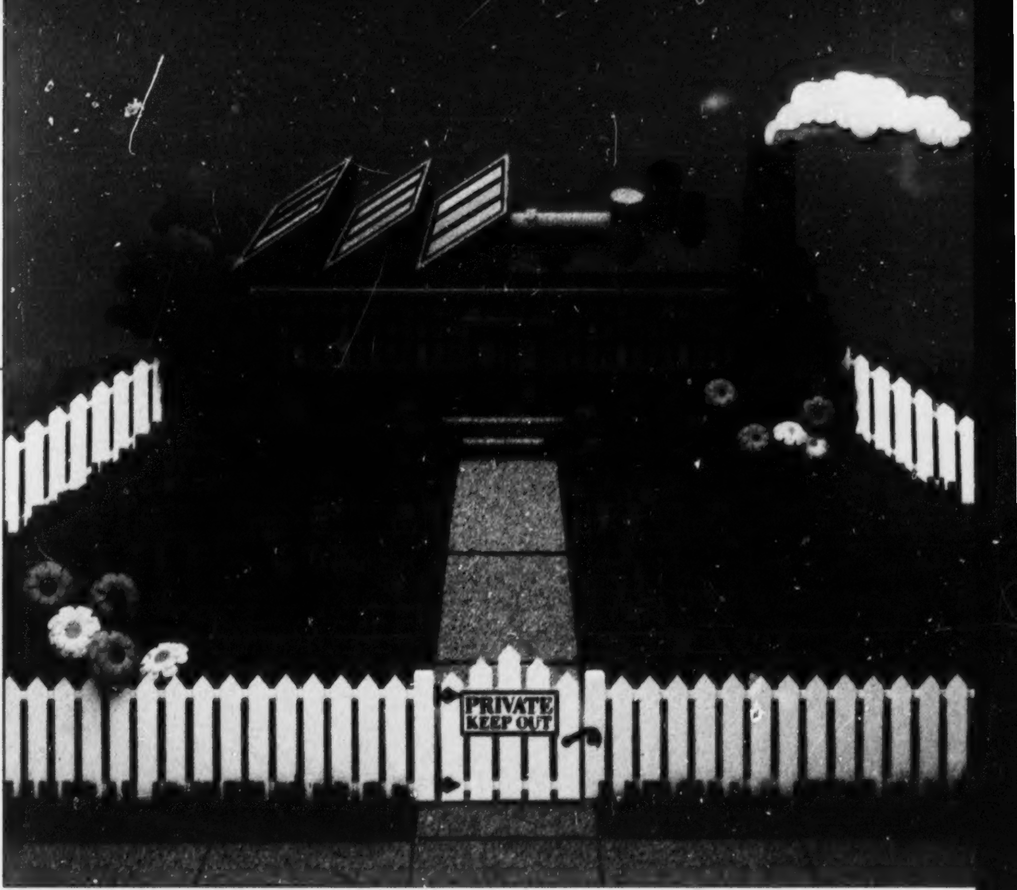
DIRECTORY

The 50 Largest Private Industrial Companies



If they gave up their cherished secrecy by going public, most would rank in the Fortune 500.

by LISA MILLER MESDAG

Ever since Byron Radaker, chairman of Congoleum Corp., took his company private two years ago, he's been cornered at cocktail parties by public-company bosses eager to know when he's going to retire. "They all want my job," boasts Radaker, 48, who pulled off the biggest leveraged buyout in Wall Street history. Radaker's having a ball. Instead of going on road shows to pump the company stock, spending countless hours with government agencies, and worrying about what he calls "all those nameless, faceless shareholders," he is free to concentrate on what he likes doing most—making money. The result: earnings are up and management, with an equity stake in the business, is energized.

Radaker is just one of many who prefer the private path. Of the nation's 2.6 million corporations, 99% are privately held; together they account for half the GNP and half the nation's jobs. The list at right ranks the 50 largest private U.S. industrial corporations by sales volume. They are the Goliaths of private industry, yet their cumulative volume, $48.6 billion, would collectively place them in only the No. 5 spot on the FORTUNE 500, right after Texaco. The sales estimates for oil and beverage companies on the list include excise taxes.

As in the FORTUNE 500, each company listed derives more than half its revenue from manufacturing and/or mining. By sticking to this definition of an industrial company, the list avoids comparing dissimilar businesses—manufacturers and retailers, for instance—and excludes several well-known private names (some of which are discussed on page 112).

Coming up with sales estimates can be difficult. One trait private companies have in common is the vigor with which they defend their privacy. Only a handful supplied FORTUNE with exact sales figures for 1981; others offered estimates, and a few refused to comment. Some chief executives took personal offense at being asked.

Two telephone calls were required to Samuel Newhouse Jr., head of Advance Publications (*Gentlemen's Quarterly*, *Glamour*, *Vogue*), before he would divulge the company's correct name. At that, Newhouse wouldn't disclose his title. The No. 1 company, Mars, which spends an estimated $84 million annually to tout its Milky Ways, Snickers, Kal Kan pet foods, and other products, stands mute when it comes to discussing itself. Says a company officer: "It will be a cold day in hell before the president of Mars talks to the press."

One of the most impressive features of the list is the number of recent converts.

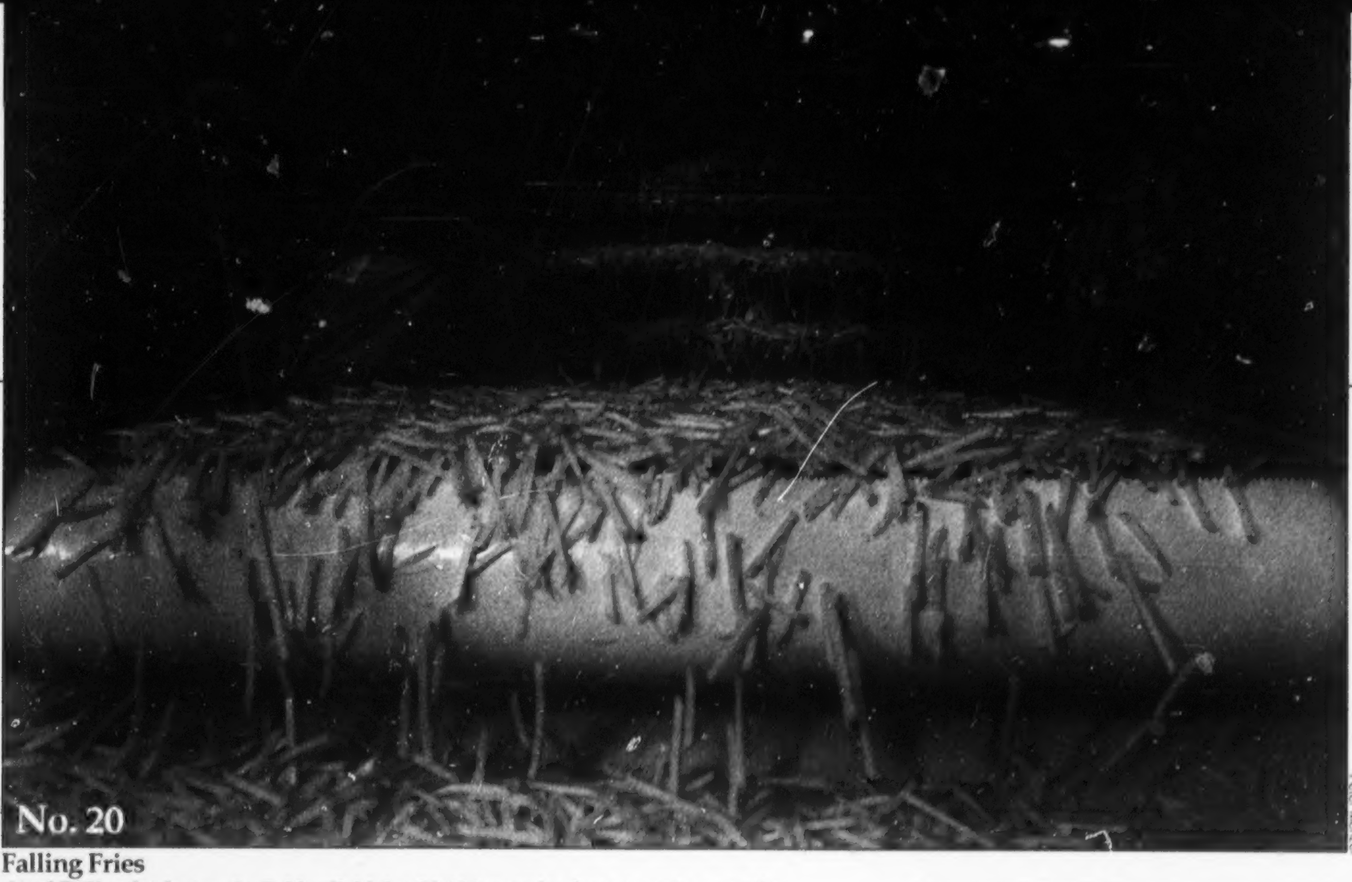
continued

Research associate: Jane Staats

Paper sculpture by Sally J. Vitsky

THE 50 LARGEST PRIVATE INDUSTRIAL COMPANIES

RANK	COMPANY	HEADQUARTERS	INDUSTRY	SALES ($000)
1	**Mars**	McLean, Va.	Candy	4,000,000
2	**Hughes Aircraft**	Culver City, Calif.	Aerospace	3,300,000
3	**GHR**	Destrehan, La.	Petroleum refining, crude-oil production	3,000,000
4	**Milliken**	Spartanburg, S.C.	Textiles	2,000,000
	S.C. Johnson & Son	Racine, Wis.	Chemicals, soaps, cosmetics	2,000,000
6	**Hillman**	Pittsburgh	Electronics, refrigeration and transportation equipment	1,750,000
7	**Dubuque Packing**	Dubuque, Iowa	Meatpacking	1,500,000
8	**Tribune**	Chicago	Newspapers	1,406,000
9	**Advance Publications**	New York	Newspapers, magazines, books	1,400,000
	Amway	Ada, Mich.	Soaps, cosmetics	1,400,000
11	**Gates**	Denver	Rubber products	1,250,000
	Hallmark Cards	Kansas City, Mo.	Greeting cards	1,250,000
13	**Readers Digest Association**	Chappaqua, N.Y.	Magazines, books	1,200,000
	Warren-King	Houston	Crude-oil production, petroleum refining	1,200,000
15	**Hearst**	New York	Newspapers, magazines, books	1,100,000
16	**Congoleum**	Portsmouth, N.H.	Shipbuilding, vinyl flooring	1,000,000
	Hunt Oil	Dallas	Crude-oil production	1,000,000
18	**Steelcase**	Grand Rapids, Mich.	Office furniture	880,000
19	**Pride Refining**	Abilene, Texas	Petroleum refining	850,000
20	**Estée Lauder**	New York	Cosmetics	800,000
	J.R. Simplot	Boise, Idaho	Food, fertilizers	800,000
22	**Metallurg**	New York	Ferroalloy mining and manufacturing	750,000
23	**Hill Petroleum**	Houston	Petroleum refining	747,000
24	**Allen-Bradley**	Milwaukee	Electronic components, industrial controls	700,000
25	**E.W. Scripps**	Cincinnati	Newspapers, magazines	650,000
26	**Norris-N.I. Industries**	Long Beach, Calif.	Appliances, automotive parts, ordnance	647,000
27	**Southwire**	Carrollton, Ga.	Wire, cables	606,000
28	**Lennox Industries**	Richardson, Texas	Air conditioning, heating units	600,000
	Parsons & Whittemore	New York	Paper, fiber and wood products, industrial equipment	600,000
30	**Rock Island Refining**	Indianapolis	Petroleum refining	592,000
31	**Marley**	Mission Woods, Kans.	Pumps, boilers, ventilation equipment	569,000
32	**Drummond**	Jasper, Ala.	Coal mining	566,000
	Stroh Brewery	Detroit	Beer	566,000
34	**Great Lakes Carbon**	New York	Graphite, carbon products	550,000
35	**Schreiber Foods**	Green Bay, Wis.	Cheese	535,000
36	**TIC United**	Dallas	Farm equipment	524,000
37	**AMG Energies**	Garland, Texas	Coal mining	500,000
	E.&J. Gallo Winery	Modesto, Calif.	Wine	500,000
	Houdaille Industries	Fort Lauderdale, Fla.	Seals, pumps, machine tools	500,000
	Moorman Manufacturing	Quincy, Ill.	Livestock feed	500,000
41	**Powerine Oil**	Santa Fe Springs, Calif.	Petroleum refining	480,000
42	**Duchossois Thrall Group**	Chicago Heights, Ill.	Railroad equipment, ordnance, electronics, doors	450,000
	Triangle Publications	Radnor, Pa.	Magazines	450,000
44	**J.M. Huber**	Edison, N.J.	Crude-oil production, printing inks	435,000
45	**Gillett Group**	Nashville	Meatpacking	430,000
	Perdue Farms	Salisbury, Md.	Poultry	430,000
47	**Coca-Cola Bottling of N.Y.**	Hackensack, N.J.	Soft drinks	400,000
	Cox Enterprises	Atlanta	Newspapers	400,000
	Kohler	Kohler, Wis.	Plumbing fixtures, engines, generators	400,000
	United Coal	Bristol, Va.	Coal mining	400,000
	TOTAL			**48,563,000**


No. 20

Peter Menzel

Falling Fries

At a J.R. Simplot factory in Caldwell, Idaho, 20,000 pounds of potato strips cascade down the production line each hour. Fried, quick-frozen, and packaged, they're destined for McDonald's, Wendy's, Burger Chef, and elsewhere.

The record-setting buyout of Congoleum cost 46 private investors $470 million; as chairman, Radaker got his 7% share for just $1.8 million. Besides Congoleum, five companies on the list went private in the last three years, four through leveraged buyouts.

The top 50 are in everything from meatpacking and plumbing fixtures to poultry and petroleum refining. In 35 cases the majority of shares are held by one family. Forty-one companies are of FORTUNE 500 size, while the other nine would rank high in the Second 500. Many are powerhouses in their fields: Steelcase is the world's largest manufacturer of office furniture, Mars the nation's biggest confectioner, Gallo the most successful winemaker in California's history. Most have been wooed by investment bankers to go public, especially during the Sixties when hundreds of new issues were sold at multiples of 25 times earnings and the stock market offered a way to get rich quick. Still these companies resisted the temptation. Why?

In a word, freedom. For the most part, people who start their own companies have entrepreneurial flair and a yen for freewheeling. Léon A. Danco, founder of the Center for Family Business in Cleveland, thinks power drives many. "There are no shrinking violets," he says. "The owners of private companies have power equaled only by wartime captains of ships at sea and tenured professors in their classrooms." With ownership control, their position is secure. They bridle at the thought of annual reports, SEC filings, probing analysts—all the requirements that Radaker estimates cost Congoleum $7 million a year when it was public.

As many heads of private companies see things, their peers at public corporations are torn by conflicting goals. On one hand, public companies are under pressure to report high profits to shareholders—a group one consultant calls the Great Beast. Tax considerations, on the other hand, pull in the opposite direction: managers want to maximize cash flow, not taxable earnings that must be shared with the IRS.

The owner of a private company faces no such conflict: he buries earnings whenever possible. The right kind of write-off is seen as an opportunity, not a liability. David Jones, 35, president of Pride Refining in Abilene, Texas, actively pursues tax shelters, but concedes that his tactics would differ if he were running a public company: "If I knew my compensation next year

No. 1

John Mamaras—Woodfin Camp

Trick or Treat

Hallmark will have little raccoons ready for Halloween 1984. These prototypes are on their way to Hong Kong for mass reproduction.

"Every C.E.O. says he plans for the long term," says ITT's former chief executive. "But every C.E.O. lies."

No. 47

Hot Tub
Kohler Co. is one of the nation's largest manufacturers of bathtubs. The worker is sifting powdered enamel on a cast-iron tub that's about to go back in the furnace.

would be based on this year's return on equity, hell no, I wouldn't act the same. You've only got a few years at the top in a public company to make your killing. You want to put every penny on the bottom line to wind up with the juiciest retirement package you can get."

Wall Street's hunger for short-term results keeps public-company managers scrambling to show rising profits every quarter. By contrast, the head of a private company can take a longer view without worrying about a temporary earnings slide. Lyman Hamilton, 55, former chief executive of ITT who now heads the privately owned Tamco Enterprises, believes short-term pressures distort decisions. "Every C.E.O. says he plans for the long term," Hamilton says. "But every C.E.O. lies. He's always temporizing with quarterly earnings. If he doesn't hack it quarter to quarter, he doesn't survive."

The fall of Etherea

Freedom from the Great Beast allows private companies to take risks a public corporation might shun. Leonard Lauder, 49, chief executive of Estée Lauder, the cosmetics maker, cites two examples. Last year, the strong dollar depressed the profitability of exports. Still, Lauder expanded overseas shipments to build market share rather than cutting back to protect earnings—as he says he might have had he been steering a public company.

Similarly, Lauder says, he would have had difficulty launching Clinique, an allergy-tested cosmetics line, if Estée Lauder were a public company. Six months after Clinique came to market in 1968, Revlon introduced a copy called Etherea. In Lauder's opinion, Revlon's fear of clobbering earnings kept it from committing the resources and management needed to make Etherea a winner. "Etherea lost less money than Clinique did that year," he admits. But now Clinique's market share in department stores is 13%, while Etherea's is negligible. Richard Salomon, 70, former president of another cosmetics company, Charles of the Ritz, regrets his decision to go public in 1961 and concurs with Lauder's assessment. "Lauder would never have gotten as far ahead of us had we stayed private," he says. "While they could live with Clinique losing money, our earnings had to go forward."

Comparing the financial performance of private and public companies is difficult. One of the few studies to do so found that the privately held firms did better. It was conducted by the University of Southern California business school, drawing on 1975 data supplied by the IRS, FTC, SEC, and other sources. Despite their tendency to hide earnings from the tax man, the study concluded, private companies showed profit margins nearly three times as fat as public corporations and earned higher returns on assets.

Privacy has pitfalls, though, when it comes to financing capital projects. Without access to public equity markets, private companies must rely on internally generated cash, bank borrowings, and private debt placements with a small number of institutional investors. As their financing demands grow, the companies are becoming more innovative in making use of tax-exempt industrial-revenue bonds and commercial paper backed by letters of credit. Of two dozen executives interviewed from the top 50, only one felt privacy had impeded his company's growth.

The heads of private companies are fond of bragging about their ability to respond quickly to competitive thrusts. "I can pick up the phone and get approval from my three shareholders in minutes," says William F. Burke, 54, president of Powerine

Some Folks Can't Stay Out of the News

While not comprehensive, the list below offers a sampling of the largest private non-industrial companies in the U.S.—those whose revenues come mainly from businesses outside mining and manufacturing. Beyond doubt, the biggest is Cargill, with sales estimated by FORTUNE at a staggering $28 billion a year. Half of these revenues come from buying agricultural commodities—wheat, corn, sugar—in one place and selling them in another.

Koch Industries and Apex Oil were omitted from the industrial list because less than half their revenues come from exploration, production, and refining. The only company on this list ever to have been public is Twentieth Century-Fox, bought by Denver oil millionaire Marvin Davis, 57, last year.

Despite their private status, some companies have had their share of publicity. Howard Hughes's heirs are still battling for control of Hughes Corp., which owns Hughes Helicopters and Summa Corp. Summa, in turn, owns about 29,000 acres of land and three hotel-casinos in Nevada. (Hughes Aircraft, No. 2 on the industrial list, is owned by the Howard Hughes Medical Institute.)

T. Cullen Davis, 48, an owner of Kendavis Industries, founded by his father, was acquitted of murder three years ago. One of the richest men in Texas, the debonair Davis was accused of wounding his first wife, Priscilla, and killing her lover and her daughter. Two years later Davis was also acquitted of soliciting the murder of the judge who presided over his divorce from Priscilla.

COMPANY	HEADQUARTERS	INDUSTRY	SALES ($000)
Cargill	Minnetonka, Minn.	Commodities trading	28,000,000
Continental Grain	New York	Commodities trading	15,000,000
Koch Industries	Wichita, Kans.	Petroleum marketing	14,000,000
Mocatta Metals	New York	Bullion dealing	13,500,000
Bechtel Group	San Francisco	Engineering and construction	11,400,000
Apex Oil	St. Louis	Petroleum marketing	10,000,000
Kendavis Industries	Fort Worth, Texas	Contract drilling, oil-field supplies	2,000,000
Carlson	Minneapolis	Hotels, trading stamps	1,600,000
Hughes	Las Vegas	Hotels, casinos, helicopters	1,400,000
Twentieth Century-Fox	Los Angeles	Films, television	865,236

Oil, a West Coast refiner. Samuel C. Johnson, 54, chairman of S.C. Johnson & Son (Johnson's Wax, Raid, Pledge), boasts that his company could introduce a furniture polish within six weeks after learning of a new Bristol-Myers product. Quick reflexes are especially important to the six refiners on the list. David Jones at Pride Refining prides himself on the ability to switch his product mix at a moment's notice from, say, gasoline to jet fuel. By contrast, he likens a major oil company to an elephant running downhill: "If you grab his trunk, it takes a while to stop him."

In a public company the potential for embarrassing exposure and the need for accountability cause delays as managers seek second and third opinions. Product surveys, market studies, and field tests are commissioned and consultants and investment bankers hired. The fear of strike suits, bad publicity in the event of error, and carping analysts obliges executives to leave a paper trail. Henry Hillman, 63, president of the Pittsburgh-based conglomerate that bears his name, contrasts this with his style: "I don't write one memo a month. We do everything by talking." Ray Robbins, 61, chairman of Lennox Industries, a Texas manufacturer of furnaces and air conditioners, says his attitude changes when he sits on a public company's board: "I have a fiduciary duty to the shareholders. So I'm more conservative, more ponderous, more inclined to probe. You want to belt the suspenders."

Despite their entrepreneurial environment, private companies may be at a disadvantage when it comes to assembling a management team. Lester Korn, chairman of Korn/Ferry International, an executive-recruiting firm, says headhunters have a hard time recruiting for private companies. Job candidates tend to prefer public outfits that are better known and easier to obtain information about. Lack of financial data fuels suspicion.

A company vizier

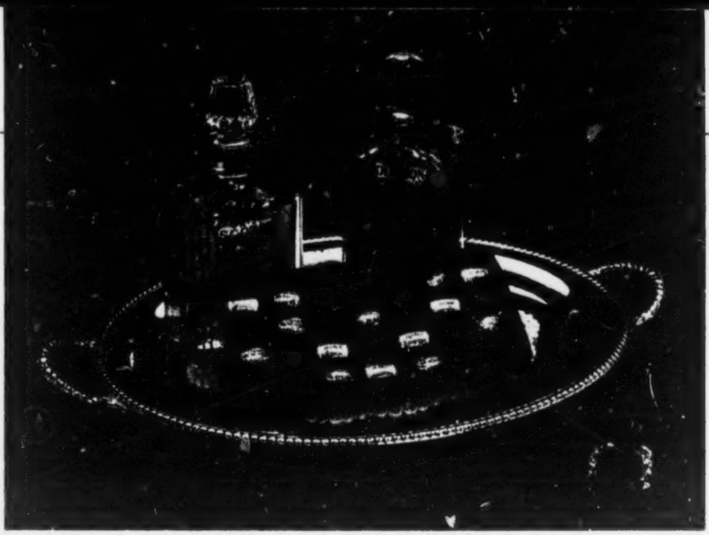
A private company can't offer executives the usual stock options; the closest they generally come is to issue some sort of phantom stock that must be sold back to the company when the executive leaves. Consequently, Korn says, to attract top managers private companies have to pay a 20% to 25% cash premium and put together creative compensation packages tailored to their needs—automobiles, home loans, club memberships, even assistance in putting the kids through college.

Once hired by a private company, however, many executives get enveloped by the atmosphere. The boss's long tenure, plus the fact that the top spot is often reserved for a family member, eliminates anxiety about who will be in charge next. Russell Reynolds, who heads an executive-recruiting firm of the same name, finds that private companies experience less turnover. In part, that may be because private-company executives tend to have low profiles and may therefore be less vulnerable to raiding. But the paternalistic practices of many private companies also instill loyalty. S.C. Johnson was among the first corporations to institute profit sharing; it started a no-layoff policy during the Depression, and has long given 5% of pretax earnings to charity. An executive vice president at another company likens his position to that of the vizier in the court of the Turkish sultans: "I've been here six years working with the family as their loyal servant."

Proprietors tend to see themselves as more concerned about the welfare of their communities than are the hired hands of public corporations. Frank Perdue, the chicken man, recalls that several months ago the YMCA in Salisbury, Maryland, was about to close for lack of funds. Perdue, whose family ties to the community date back 300 years, was instrumental in saving it. "It became a matter of personal pride," he says. "I was certainly more concerned than some Harvard MBA who might be running Campbell Soup's Salisbury factory for a stint before he's promoted to another location."

Sam Johnson at Johnson Wax suggests a practical side to the good-citizen argument: "I don't want to bury some toxic chemicals in a field and have it erupt when my son or daughter is sitting in this office." Ray L. Hunt, 39, billionaire owner of Hunt Oil, uses family continuity as a sell-

continued



Ethel M's alternative to the usual postprandial fare

Ed Galucci

Forrest Mars Gives an Encore

At 2 Buster Brown Drive, on a stretch of desert near Las Vegas, 60 white-clad workers engage in an activity that is illegal in 48 states. The man behind the operation is Forrest Mars, 78, sometimes called the Howard Hughes of the candy industry, who built Mars Inc. and turned it over to his two sons several years ago. What's he up to? Making liquor- and liqueur-filled chocolates.

Having never tried his hand at producing a fine boxed chocolate, Mars once remarked that he didn't want to leave this life with Snickers and the like as his only monument. So after retirement he rounded up two trusted colleagues who had been with him more than a quarter-century, invested $6 million, and plunged back into business. His new company, Ethel M, named for his mother, opened in March last year.

Until a year ago, Kentucky was the only state to permit the manufacture of candy containing alcohol. But Mars successfully petitioned the Nevada legislature to change its law. The new law allows confections to contain up to 4% alcohol.

Publicity-shy, Mars forbids his employees to talk about him on pain of instant dismissal. But word of his style has leaked out. He once sank to his knees at a staff meeting in Chicago and intoned: "I pray for Milky Ways. I pray for Snickers." Another time, he hurled an entire case of ill-wrapped candy bars, one by one, at a glass partition to demonstrate his displeasure with the quality slip.

Mars divides his time between his 740-acre Virginia estate and Las Vegas, where he lives in an apartment above the factory. As he did at Mars Inc., he minimizes differences in rank at Ethel M. All employees, including executives, wear white uniforms; everyone punches a time clock; executive parking spaces, even offices, have been eliminated.

Aimed at the 20 million tourists who visit Nevada every year, Mars's new bonbons sell for $10 a pound in 15 hotels in Las Vegas, Reno, and Lake Tahoe and at the Las Vegas airport. They come with or without alcohol and contain no preservatives. The stuff that's spiked with crème de menthe, brandy, scotch, and bourbon cannot be sold across state lines. But anyone expecting the potent burst of booze found in some European varieties will be disappointed; Ethel Ms are creamy, with just a hint of alcoholic flavor.

How are they selling? Dean Musser, administrative director, admits that the company hasn't yet broken even. But by year-end, he hopes, production will reach 20,000 pounds a week, which would bring in about $5 million a year.

R&D is getting top priority. Ethel M is putting the finishing touches on a new coffee-liqueur candy and is working hard on a fresh-tasting strawberry crème that so far has stumped its experts. Unpreserved strawberries, it turns out, contain an enzyme that turns the crème brown.

---

ing tool. In bidding for rights to drill in the South China Sea, Hunt promised the Chinese: "Five years from now you'll be looking at the same set of faces. What we tell you today will still stand then."

This is not to suggest that privacy is all peaches and cream. Psychologist Harry Levinson, president of the Levinson Institute in Cambridge, Massachusetts, a management consulting firm, is only half joking when he says: "Family business is the most difficult business in the world, and no family ought to be in it." Only 25% survive into the second generation, and as ownership among claimants becomes dispersed, the potential for power struggles, internecine feuds, and divergent interests increases. A welter of organizations ranging from the National Family Business Council, a Washington lobby, to SOBs (Sons of Bosses), founded to help heirs apparent get along with Dad, have sprung up to help families cope.

The survival of a company depends on how the owner deals with succession, nepotism, and estate planning. Drummond Co. has a rule that bans third-generation family members from working there. Garry Drummond, the second-generation chief executive, thinks professional managers would be discouraged with lots of nieces and nephews around. The Newhouse clan takes the opposite view: a score of them occupy management positions.

"The corporate boudoir"

Ray Hunt emphasizes the importance of getting all the owners to play on the same team. After spending a year untangling his father's estate, he sat down with his mother and sisters to plan for the next generation and clarify lines of authority. The conclusion: Hunt runs what he calls a "benevolent dictatorship." He consults with the ladies—then calls the shots. Says he: "It just wouldn't do to have three Hunts calling a geologist with three different sets of instructions."

A dictator can be dangerous, regardless of benevolence, if he has visions of infallibility. Léon Danco cautions proprietors to guard against making "the corporate boudoir as sacrosanct as the personal boudoir." A strong board of outside directors can be valuable. Still, nothing can protect a strong-willed owner from himself: Sam Johnson remembers ordering the consolidation of the company's European manufacturing operations over the protestations of the board and his father. The plan finally worked out, but only after a few disastrous years of turning out cans for the Dutch market with French labels on them—and a $5-million loss.

The top 50 are true believers in the private way of doing business. Only one, AMG Energies, a coal-mining operation in Texas, is actively thinking about going public. The rest relish being mysterious competitors who can scrutinize the finances of their public rivals through a one-way mirror. And they think attention should be directed at their products, not themselves. As Henry Hillman puts it, explaining why he makes a practice of avoiding interviews: "A whale is harpooned only when it spouts." ■

Getting Lean and Mean in the Oil Business

Why Unemployment Will Hang High

Fortune's 2nd 500 Largest Industrial Corporations

$3.00 June 14, 1982

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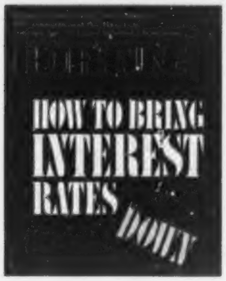

The messages conveyed by FORTUNE covers are rarely stated as baldly as in this typographical design by art director Ronald N. Campbell. The subject, however, is the overriding economic issue of the times. The story begins on page 66.

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4—Terry Hourigan. 13—Courtesy of Datapoint Corp. 33—William Strode-Woodfin Camp. 59,60—Chartmakers, Inc. 63,64—Michael McGinn. 68—Patricia Byrne. 69—Roddey E. Mims, Terry Ashe. 89—Courtesy the *Globe and Mail,* Toronto. 96—Rendering by Barry Zauss. 150,151—Bill Silbert. 174—Parios Studio. 212—Patricia Byrne. 229—Terry Hourigan.

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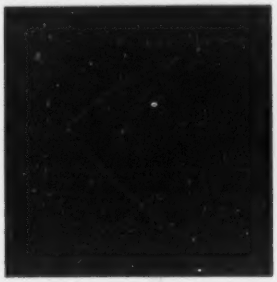
June 14, 1982



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THE FORTUNE DIRECTORY OF THE LARGEST U.S. INDUSTRIAL CORPORATIONS

The 2nd 500

The past year produced several negative records for the FORTUNE Second 500. For the first time in the 13-year history of the list, which encompasses the U.S. industrial companies ranking in size from 501 through 1,000, the sales cutoff point fell—from $124.7 million in 1980 to $122.5 million for 1981. The total sales of the group rose, as they have every year, but the rise, 0.8%, was the smallest ever and translates, after adjusting for inflation, into a real decline of 9.6%. The total of the Second 500's employees, 1.6 million, is also the lowest ever—a 20% drop from the 1974 peak.

In part the numbers reflect structural changes in the two FORTUNE 500 lists. Seventy-five companies on last year's Second 500 have left the list. Of those, 29 moved up to fill vacancies in the First 500; a score of those vacancies were created by a record number of acquisitions and mergers. Eleven companies on the Second 500 were acquired by companies not on the list, two (Copeland and Russell Stover Candies) went private, and one (OKC) was liquidated. In addition, companies engaged in broadcasting and motion-picture production were removed from both industrial lists this year—six from the First 500, eight from the Second—because they have been reclassified as diversified-service corporations. Some are apt to appear on the list of such firms FORTUNE will publish for the first time in the July 12 issue.

The recession also took a toll; 13 companies fell off the list because their sales declined. Further signs of distress: total profits were down 4.4% (14.8% if adjusted for inflation), and 51 companies lost money, the poorest showing since 1975. The median total return to investors, 1.4%, was the worst since 1974; that includes both dividend yield and stock-price appreciation.

The places vacated by the 75 departing companies were filled by 25 that returned to the Second 500 after absences of varying lengths and by 50 newcomers. Of those returning, four dropped down from the First 500, including International Flavors & Fragrances, which heads the Second 500 this year—as it did in 1979.

Several companies returned after being absent for many years. Kearney-National, No. 959 in 1969, reentered the list as No. 814 with the largest percentage increase in sales recorded by any Second 500 company. A manufacturer of electrical power distribution products, Kearney-National tripled its sales to $186.5 million when it acquired Wabash, a maker of computer-memory products and electrical and electronic components. Keuffel & Esser, No. 987 in 1970, and General Steel Industries, No. 639 in 1972, also returned. But these are farewell appearances: both were acquired after their 1981 fiscal years.

The fruits of Apple's growth

Hard-charging newcomers accounted for seven of the ten companies recording the greatest percentage increases in sales. Apple Computer, perhaps the best known, followed Kearney-National with the second-largest increase—but did it entirely through internal growth. Apple increased its revenues by 185.8% to $334.8 million in its first year as a public company, enabling it to leapfrog 80% of the list and become No. 598. Still, that was a modest increase by Apple standards; its sales have grown at a compound annual rate of 356% over the last four years.

The fates of two companies show that higher sales are not necessarily good news. Newcomer Tomlinson Oil (No. 970) got on the list because its sales rose 119%. But its 1980 profit of $3 million turned into a 1981 loss of $5.4 million as a result. A petroleum refiner, Tomlinson completed a major capacity expansion just as deregulation allowed domestic crude prices to rise and the recession produced a soft market for refined products.

Sealaska (No. 745) had its own sort of growth-related misfortune. A transportation and building-products company owned and operated by Alaskan Indians, it managed 1980's largest percentage increase in sales—684%—with the purchase of a seafood processor. All was well until February 1982, when the Food and Drug Administration advised that salmon canned by the new subsidiary might be contaminated with botulin. Sealaska has now recalled nearly ten million cans. It plans to charge the expense against 1981 earnings—all the cans were produced last year or earlier—and so does not yet have a final net income figure.

The most unenviable record was set by No. 984, Combustion Equipment Associates, a manufacturer of pollution-control equipment that has been in Chapter 11 since 1980. Combustion Equipment's $129.9-million loss is the largest in the Second 500's history. More monumentally, the loss is the first by any company on any FORTUNE list that exceeds its sales—which amounted to $129.6 million. The bulk of the loss came from a $93.9-million write-off of ventures that converted wastes into fuel and built utility scrubbers.

Several companies recorded spectacular but illusory percentage increases in profits. Kuhlman, a manufacturer of electric transformers, dropped from the list in 1980 and returned as No. 950 in 1981, posting the largest gain—9,767.6%. However, that reflected a $3.6-million increase over its 1980 profit of $37,000. Five other companies boasting profit increases of over 1,000% earned less than $1 million in 1980.

The median total return to investors—that wretched 1.4%—masks large differences among industries. As in the First 500, apparel companies performed best, providing a one-year return of 36.3%. The worst—believers in efficient capital markets will not be surprised—was the industry recording the largest decrease in profits, the lowest return on stockholders' equity, and the lowest return on sales. A person holding a stock portfolio of Second 500 petroleum refiners throughout fiscal 1981 would have seen his investment diminish by 37.5%. The second-worst one-year investment performance—minus 28.9%—was recorded by the aerospace industry. Aerospace did post the best ten-year record, a compound annual return of 22.5%, but that seeming triumph mainly reflects the industry's depressed stock prices at the end of 1971.

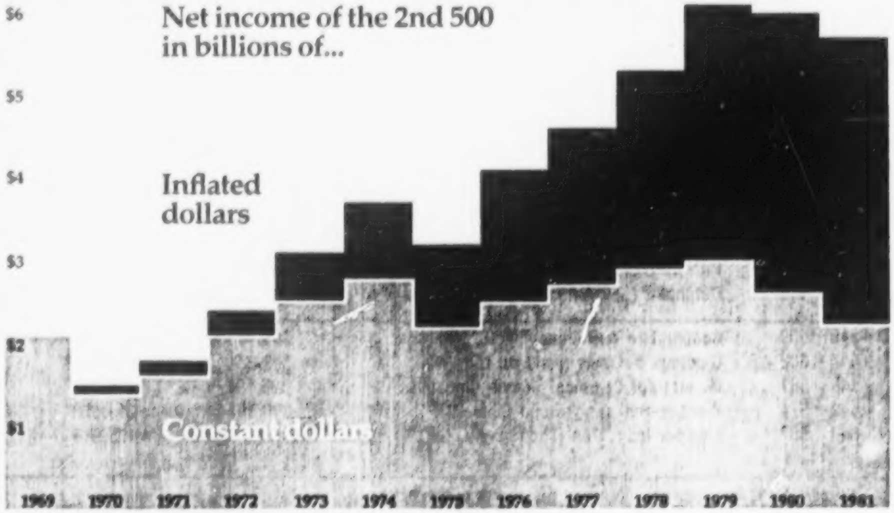
Bye-bye, Illini

Two veteran Second 500 companies are making what are likely to be their last appearances. Each dropped a substantial portion of its business in 1981, but because FORTUNE includes discontinued operations in its calculation of net sales, each was able to remain on the list this year. Illini Beef Packers (No. 855) sold its slaughtering and packing operations, leaving the company only with processing operations, which accounted for $22.8 million in sales in 1981, and with a new name, Imark Industries. Another food company, Acton (No. 577), spun off its food business, which accounted for sales of $338.3 million in 1981, into a newly organized company, Beltran. Its remaining businesses, manufacturing telephone-interconnect equipment and operating cable-television systems, produced sales of only $18.7 million in 1981. Although Imark Industries and Acton will probably not appear on a FORTUNE list for some time to come, Beltran can be expected to make its debut next year—a year that with any luck at all will be more hospitable to the Second 500 than was 1981.

—ELIZABETH S. SILVERMAN

Performance of the 2nd 500	1981	1980
Sales (billions)	$120.9	$120.0
Change in sales	.8%	9.2%
Profits (billions)	$5.7	$6.0
Change in profits	–4.3%	–2.4%
Assets (billions)	$90.7	$86.9
Number of sales increases	404	414
Number of profit increases	319	282
Number of money losers	51	42
Median return on sales	4.3%	4.5%
Median return on equity	13.6%	14.2%
Median total return for the year	1.40%	21.57%
Number of employees (millions)	1.6	1.7

An Unprecedented Two-Year Earnings Slump



THE SECOND 500 LARGEST INDUSTRIAL CORPORATIONS (ranked by sales)§

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDER EQUITY ($000)	STOCKHOLDER EQUITY RANK
501	498	**International Flavors & Fragrances** (New York)	451,088	430,890	18	66,123	4	329,878	5
502	511	**A.H. Robins** (Richmond, Va.)	450,854	443,942	17	44,228	10	310,201	7
503	529	**Seaboard Allied Milling** (Chestnut Hill, Mass.)[1]	450,445	140,640	280	6,512	311	58,956	310
504	537	**Ametek** (New York)	448,086	265,343	77	26,488	65	143,437	76
505	577	**MEI** (Minneapolis)	445,781	250,696	88	26,911	59	109,222	139
506	530	**Harvey Hubbell** (Orange, Conn.)	445,758	283,121	64	34,609	28	178,100	37
507	504	**North American Coal** (Cleveland)	445,166	892,816	2	618	433	80,396	218
508	542	**Amdahl** (Sunnyvale, Calif.)	442,774	457,078	16	26,764	62	266,165	10
509	533	**Snap-on Tools** (Kenosha, Wis.)	441,514	339,150	34	40,013	18	213,057	17
510	506	**Royal Crown Companies** (Atlanta)	441,508	228,407	114	15,530	146	108,904	140
511	564	**Pittsburgh-Des Moines** (Pittsburgh)	441,105	164,555	220	6,408	314	71,241	256
512	544	**Stanadyne** (Windsor, Conn.)	439,344	231,716	111	25,273	70	141,695	80
513	553	**Transamerica Delaval** (Lawrenceville, N.J.)[2]	436,800	322,500	45	34,200	30	174,200	42
514	550	**Universal Foods** (Milwaukee)[3]	435,776	208,193	145	13,663	170	93,743	172
515	515	**Roper** (Kankakee, Ill.)[4]	433,712	196,377	164	6,473	312	77,671	228
516	528	**Butler Manufacturing** (Kansas City, Mo.)	433,035	273,857	73	16,093	138	162,708	53
517	492	**Questor** (Toledo)	431,086[#]	219,339	130	(20,365)	488	111,563	134
518	653	**Worthington Industries** (Columbus, Ohio)[1]	428,144	254,164	84	22,891	85	101,022	164
519	526	**Liquid Air** (San Francisco)[5]	427,991	484,307	15	31,526	40	234,955	13
520	485	**Fleetwood Enterprises** (Riverside, Calif.)[6]	427,621	169,465	208	2,440	396	107,022	146
521	●	**Standard Commercial Tobacco** (Wilson, N.C.)[7]	427,586	182,901	185	9,195	237	47,244	377
522	525	**Dairylea Cooperative** (Pearl River, N.Y.)[7]	425,239	88,814	421	N.A.[9]		11,584	491
523	497	**McDonough** (Parkersburg, W. Va.)[10,11]	424,395	211,538	141	15,639	143	157,578	59
524	521	**American Maize-Products** (Stamford, Conn.)	423,153	219,420	129	12,208	191	108,811	142
525	5[illegible]9	**Phillips-Van Heusen** (New York)[10]	419,357	201,333	155	5,356	339	93,721	173
526	551	**Keystone Foods Corp.** (Bryn Mawr, Pa.)[12]	418,683	92,821	400	4,132	364	22,848	471
527	505	**Jonathan Logan** (Secaucus, N.J.)	417,738	223,828	119	(11,989)	483	118,606	115
528	524	**Holly** (Dallas)[4]●	417,138	158,499	231	5,672	331	56,421	321
529	686	**Quanex** (Houston)[13]	416,762	277,391	70	31,444	42	129,632	92
530	634	**Echlin Manufacturing** (Branford, Conn.)[14]	415,747	342,524	33	12,737	186	199,867	22
531	569	**Easco** (Baltimore)	414,567	194,095	169	12,971	182	79,050	223
532	554	**Stone Container** (Chicago)	411,051	333,311	36	23,964	78	133,459	85
533	487	**General Refractories** (Bala Cynwyd, Pa.)	409,803	303,430	54	(18,951)	487	83,710	206
534	570	**Cross & Trecker** (Bloomfield Hills, Mich.)[3]	408,916	335,411	35	41,169	17	187,919	29
535	580	**Maytag** (Newton, Iowa)	408,637	229,460	113	37,436	21	189,919	27
536	586	**Wisconsin Dairies Cooperative** (Baraboo, Wis.)[7]	408,014	77,747	451	N.A.[9]		33,949	431
537	548	**Carlisle** (Cincinnati)	406,313	225,344	117	35,317	27	132,433	90
538	556	**Lukens Steel** (Coatesville, Pa.)	405,718	261,121	79	10,634	213	143,234	77
539	582	**Meredith** (Des Moines, Iowa)[16]	403,425	316,177	48	23,595	82	150,845	67
540	540	**Keystone Consolidated Industries** (Peoria, Ill.)[16]	401,340	236,474	105	(2,550)	457	107,549	144
541	531	**Acme-Cleveland** (Cleveland)[3]	400,744	252,017	85	10,931	210	121,668	107
542	562	**Southland Royalty** (Fort Worth, Tex.)	400,139	687,820	5	28,791‡	52	106,043	150
543	●	**Siemens-Allis** (Atlanta)	399,600	241,300	97	14,200	155	119,700	114
544	625	**Pittway** (Northbrook, Ill.)	399,227	282,169	65	34,318	29	183,410	32
545	615	**Datapoint** (San Antonio)[4]	396,220	490,118	14	48,761	8	318,423	6
546	609	**Cooper Tire & Rubber** (Findlay, Ohio)	393,945	185,523	180	17,266	131	81,806	213
547	602	**Giddings & Lewis** (Fond du Lac, Wis.)	393,234	229,478	112	35,465	26	171,448	43
548	587	**Mississippi Chemical** (Yazoo City, Miss.)[16]	392,154	422,641	19	N.A.[9]		159,035	56
549	574	**Prentice-Hall** (Englewood Cliffs, N.J.)	390,567	319,628	46	33,796	32	176,241	41
550	567	**Flowers Industries** (Thomasville, Ga.)[16]	390,015	175,948	197	14,068	159	76,972	231

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 200.

§Company sales are ranked 501 to 1,000; all other categories are ranked 1 to 500.

N.A. Not available.

●Indicates that a corporation was not among the 500 or the Second 500 in 1980.

†Average for the year; see the reference to "employees" on page 200.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on p

[#] Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[1] Figures are for fiscal year ending May 31, 1981.

[2] Wholly owned by Transamerica.

[3] Figures are for fiscal year ending September 30, 1981.

[4] Figures are for fiscal year ending July 31, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
3,582	177	14.7	16	20.0	86	1.81	1.73	0.45	14.93	144	(10.16)	278	(0.51)	314	43
5,500	60	9.8	64	14.3	231	1.77	1.01	0.75	8.97	224	(0.48)	233	(3.33)	338	42
755	475	1.4	378	11.0	305	4.38	3.91	1.60	10.59	211	24.41	118	14.68	115	20
7,000	18	5.9	171	18.5	123	2.44	2.02	0.46	18.16	103	10.12	181	19.27	60	38
4,100	130	6.0	167	24.6	36	3.19	2.34	(1.53)‡	—		65.93	27	22.53	42	49
6,947	20	7.8	113	19.4	105	2.82	2.43	0.89	12.22	185	14.46	161	8.46	199	36
5,130	73	0.1	437	0.8	435	0.18	3.07	0.38	(7.20)	320	(22.35)	336	13.25	134	10
5,058	77	6.0	166	10.1	322	1.31	0.83	N.A.	—		(11.41)	283	—		44
6,100	39	9.1	76	18.8	116	1.98	1.92	0.46	15.72	133	10.52	178	6.38	225	34
4,800	90	3.5	291	14.3	230	1.89	1.24	1.22	4.47	279	4.51	216	(3.73)	341	49
3,956	142	1.5	377	9.0	339	2.50	3.05	0.42	19.53	84	(38.95)	412	22.55	40	34
6,224†	36	5.8	176	17.8	142	5.27	2.80	1.26	15.38	138	36.71	77	15.11	109	45
5,490	61	7.8	111	19.6	97	N.A.	N.A.	N.A.	—		—		—		45
3,617	171	3.1	306	14.6	225	1.95	1.52	0.83	6.92	226	39.02	69	9.19	189	20
5,800	46	1.5	375	8.3	351	1.78	1.36	1.17	4.29	280	23.86	120	4.76	247	45
4,262	123	3.7	276	9.9	327	2.92	3.30	0.74	14.71	145	(1.58)	240	12.09	150	34
4,300	116	—		—		(2.10)	(1.32)	0.99	—		4.36	220	(2.12)	327	40
4,500	104	5.3	194	22.7	53	1.85	1.60	0.10	33.88	11	13.67	171	—		33
4,000	138	7.4	124	13.4	252	2.86	2.76	N.A.	—		(35.23)	395	—		28
6,300	31	0.6	422	2.3	424	0.22	(0.75)	1.32	(16.40)	330	53.08	40	(6.96)	363	37
6,770†	25	2.2	357	19.5	104	5.45	3.59[8]	0.44‡	28.62	27	46.30	53	—		21
1,200	453	—		—		N.A.	N.A.	N.A.	—		—		—		20
7,300†	12	3.7	279	9.9	326	N.A.	5.39	1.34	—		—		—		31
3,045	219	2.9	319	11.2	303	2.35	2.07	0.93	9.71	218	(33.21)	387	3.65	258	20
9,000	3	1.3	391	5.7	389	1.79	2.48	1.01	5.89	265	50.37	45	1.00	293	23
1,901	382	1.0	407	18.1	134	1.48	1.45	N.A.	—		43.83	59	—		20
5,400	64	—		—		(2.32)	1.28	3.32	—		27.35	108	(10.71)	371	23
355	493	1.4	383	10.1	323	0.67	1.10	0.02	42.07	6	(29.51)	372	24.01	29	29
2,474†	300	7.5	118	24.3	38	3.05	1.89	0.31	25.69	40	20.67	130	27.26	20	33
7,100	17	3.1	309	6.4	379	0.70	0.55	0.42	5.24	273	(3.50)	245	17.36	72	40
5,075	76	3.1	307	16.4	167	3.85	0.97	0.85	16.31	122	50.44	44	11.42	156	34
3,550	179	5.8	174	18.0	138	2.48	2.22	0.16	31.53	20	13.83	168	21.07	50	26
5,991	43	—		—		(5.01)	0.56	(0.46)‡	—		(51.33)	446	(4.86)	351	32
4,600	100	10.1	60	21.9	62	3.32	2.70	0.19[15]	33.12	15	(16.69)	309	26.75	21	45
4,217†	124	9.2	74	19.7	96	2.65	2.67	0.90	11.40	197	14.03	167	1.96	278	36
614	481	—		—		N.A.	N.A.	N.A.	—		—		—		20
4,828	88	8.7	87	26.7	23	3.76	2.78	0.37	26.10	36	(29.64)	373	24.37	27	30
3,762†	163	2.6	338	7.4	367	2.03	0.90	0.58‡	13.35	169	6.90	199	10.49	167	33
4,136	129	5.8	173	15.6	197	7.50	6.87	1.13	20.84	73	17.98	138	15.51	102	27
5,711	51	—		—		(1.36)	(1.84)	(0.40)‡	—		93.03	16	4.14	253	33
5,700	52	2.7	327	9.0	340	2.41	4.02	(0.15)	—		(11.66)	284	10.51	166	45
530	487	7.2	128	27.2	20	0.63‡	1.34	0.11	19.07	89	(24.62)	348	38.34	4	10
N.A.		3.6	289	11.9	286	N.A.	N.A.	N.A.	—		—		—		36
5,700	55	8.6	91	18.7	117	7.25	5.01	1.10	20.75	74	41.63	65	12.97	139	36
6,824	23	12.3	34	15.3	208	2.45	1.91	(0.78)	—		(14.05)	296	—		44
3,869	153	4.4	240	21.1	71	4.12	3.36	0.55	22.31	61	9.05	190	12.77	140	30
4,474	107	9.0	79	20.7	75	3.38	3.26	(0.62)	—		(7.08)	262	17.48	71	45
1,659	416	—		—		N.A.	N.A.	N.A.	—		—		—		28
5,800	47	8.7	80	19.2	110	3.41	3.11	1.60	7.86	239	32.91	94	(1.22)	320	27
7,500†	10	3.6	285	18.3	129	2.27	1.70	0.50	16.33	121	41.44	66	11.57	155	20

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[5] Owned by L'Air Liquide 64%

[6] Figures are for fiscal year ending April 30, 1981

[7] Figures are for fiscal year ending March 31, 1981

[8] FORTUNE estimate

[9] Cooperatives provide only "net margin" figures, which are not comparable with the net-income figures in these listings

[10] Figures are for fiscal year ending January 31, 1981

[11] Wholly owned by Hanson Trust

[12] Figures are for fiscal year ending February 28, 1981

[13] Figures are for fiscal year ending October 31, 1981

[14] Figures are for fiscal year ending August 31, 1981

[15] Figure is for Cross

[16] Figures are for fiscal year ending June 30, 1981

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDER EQUITY ($000)	STOCKHOLDER EQUITY RANI
551	568	**Longview Fibre** (Longview, Wash.)[13]	389,450	353,329	26	11,261	203	169,690	46
552	585	**Diebold** (Canton, Ohio)	385,891	236,637	104	29,036	49	159,957	55
553	610	**American Crystal Sugar** (Moorhead, Minn.)[14]	384,404	258,194	80	N.A.[9]		104,301	156
554	519	**Milton Bradley** (Springfield, Mass.)	381,402	294,159	57	20,021	109	189,669	28
555	606	**Kennametal** (Latrobe, Pa.)[16]	379,856	328,780	38	33,585	33	213,621	16
556	539	**Talley Industries** (Mesa, Ariz.)[7]	376,765	218,070	133	(4,304)	466	86,998	193
557	563	**Albany International** (Menands, N.Y.)	376,036	322,635	44	27,920	56	198,026	23
558	643	**Tracor** (Austin, Tex.)	371,096	223,460	121	18,981	119	115,863	123
559	584	**Standex International** (Salem, N.H.)[16]	369,874	242,847	94	15,208	149	127,854	95
560	604	**Hillenbrand Industries** (Batesville, Ind.)[17]	367,755	286,361	62	28,690	54	168,781	49
561	599	**Media General** (Richmond, Va.)	366,544	323,923	43	31,554	39	190,679	26
562	560	**Mesa Petroleum** (Amarillo, Tex.)	366,464	2,069,355	1	115,049	1	595,445	1
563	676	**Prime Computer** (Natick, Mass.)	364,787	308,796	53	37,678	20	142,458	78
564	555	**Cleveland-Cliffs Iron** (Cleveland)	364,745	635,952	7	45,166	9	370,853	4
565	659	**Sanders Associates** (Nashua, N.H.)[4]	364,483	277,106	71	21,873	95	150,938	66
566	●	**Lufkin Industries** (Lufkin, Tex.)	364,443	247,478	91	62,697	5	191,277	25
567	590	**Zurn Industries** (Erie, Pa.)[7]	364,081	249,985	90	18,347	124	111,278	135
568	598	**Dr Pepper** (Dallas)	363,966	165,633	217	29,398	48	123,682	104
569	583	**Allen Group** (Melville, N.Y.)	362,873	201,255	156	8,679	251	88,645	190
570	620	**Rorer Group** (Fort Washington, Pa.)	362,270	312,335	52	35,581	25	177,868	38
571	595	**Alton Packaging** (Alton, Ill.)	362,165	192,344	171	9,475‡	233	95,347	169
572	614	**Tyco Laboratories** (Exeter, N.H.)[1]	360,873	274,966	72	22,519	89	126,313	101
573	557	**Alaska Interstate** (Houston)	360,842	673,058	6	41,567	16	260,473	11
574	630	**Oneida** (Oneida, N.Y.)[10]	359,591	215,310	138	22,518	90	89,570	188
575	637	**Guardian Industries** (Northville, Mich.)	359,376	386,338	23	31,395	43	157,611	58
576	636	**Coleman** (Wichita)	359,111	264,071	78	20,198	107	132,649	89
577	835	**Acton** (Acton, Mass.)	358,134¢	80,370	442	131	441	40,767	401
578	711	**First Mississippi** (Jackson, Miss.)[16]	357,697	318,926	47	29,704	47	138,384	83
579	571	**Itek** (Lexington, Mass.)	357,633¢	214,205	140	3,905	369	81,113	216
580	594	**Rubbermaid** (Wooster, Ohio)	357,138	237,854	102	25,577	68	155,029	63
581	612	**NCH** (Irving, Tex.)[6]	356,113	228,366	115	26,806	60	160,381	54
582	600	**Bandag** (Muscatine, Iowa)	354,022	240,248	99	31,475	41	179,497	34
583	675	**Stewart & Stevenson Services** (Houston)[10]	353,870	223,742	120	8,158	267	75,663	239
584	591	**DeSoto** (Des Plaines, Ill.)	353,400	179,869	189	18,840**	122	114,900	126
585	613	**Reeves Brothers** (New York)[16]	353,202	204,783	152	18,936	121	133,241	87
586	622	**Associated Coca-Cola Bottling** (Daytona Beach, Fla.)	352,608	161,962	224	26,802	61	119,946	113
587	581	**Robertshaw Controls** (Richmond, Va.)	351,565	220,345	127	7,901	276	110,174	137
588	616	**UNR Industries** (Chicago)	348,506	232,626	109	5,997	323	67,153	273
589	633	**Harte-Hanks Communications** (San Antonio)	344,810	397,821	22	25,362	69	166,709	51
590	618	**Grolier** (Danbury, Conn.)	344,786	288,049	61	14,285	154	(6,392)	497
591	578	**Amalgamated Sugar** (Ogden, Utah)	343,689	279,701	67	33,139	35	121,360	109
592	644	**Jostens** (Minneapolis)[16]	343,300	199,003	161	23,733	81	115,278	125
593	588	**Graniteville** (Graniteville, S.C.)	343,165	194,158	168	870	428	101,218	162
594	667	**Raybestos-Manhattan** (Trumbull, Conn.)	342,523	242,750	96	2,986	385	101,152	163
595	565	**UMC Industries** (Stamford, Conn.)	341,924	238,462	100	9,127	239	105,426	154
596	573	**Pettibone** (Chicago)[7]	340,924	329,812	37	718	432	107,034	145
597	593	**Olympia Brewing** (Tumwater, Wash.)	337,753*	148,930	253	(1,394)	449	71,963	254
598	●	**Apple Computer** (Cupertino, Calif.)[3]	334,783	254,838	82	39,420	19	177,387	40
599	678	**Oxford Industries** (Atlanta)[1]	333,747	147,941	254	8,771	248	74,057	246
600	645	**Murray Ohio Manufacturing** (Brentwood, Tenn.)	332,278	173,521	203	9,091	240	78,714	224

N.A. Not available

●Indicates that a corporation was not among the 500 or the Second 500 in 1980

*Does not include excise taxes; see the explanation of "sales" on page 200

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

†Average for the year; see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

¢Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200

[17] Figures are for fiscal year ending November 30, 1981

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
3,350	194	2.9	318	6.6	376	0.98	0.11	0.55	5.95	264	(20.00)	325	14.99	111	26
6,416	28	7.5	120	18.2	133	3.37	2.48	1.04	12.48	183	42.41	61	7.07	218	36
2,196†	332	—		—		N.A.	N.A.	N.A.	—		—		—		20
5,101	74	5.2	198	10.6	315	2.71	4.17	1.42	6.68	256	(28.67)	369	1.43	288	47
6,880	21	8.8	83	15.7	194	2.78	3.06	0.50	18.72	93	5.43	209	23.95	30	45
6,500	26	—		—		(1.32)	(1.65)	0.81	—		(27.50)	363	(4.24)	346	38
6,359	30	7.4	122	14.1	236	4.15	3.87	1.46	11.01	206	3.42	222	—		22
7,600	9	5.1	206	16.4	169	2.02	1.75	(3.39)‡	—		9.40	185	24.48	26	36
6,300	33	4.1	253	11.9	284	2.27	2.96	1.35**	5.33	270	(8.63)	270	10.30	170	27
5,700	53	7.8	112	17.0	155	5.74	5.03	1.32	15.83	130	60.58	30	12.34	146	34
5,700	54	8.6	90	16.5	164	4.41	3.91	1.09	15.00	143	36.17	81	9.84	180	27
889	468	31.4	2	19.3	108	1.54	1.39	0.35	15.97	126	(35.45)	398	20.18	57	10
4,636	96	10.3	56	26.4	25	1.25	1.07	N.A.	—		(42.72)	426	—		44
8,384	5	12.4	33	12.2	277	3.68	4.12	1.28‡	11.14	204	(5.18)	250	10.27	171	10
7,171	15	6.0	169	14.5	226	2.75	2.65	(5.39)	—		(25.64)	357	11.72	153	36
4,200	127	17.2	8	32.8	12	36.02	23.37	N.A.	—		—		—		45
4,700	94	5.0	211	16.5	166	3.27	2.84	0.51	20.42	77	38.16	72	3.53	264	45
2,600	274	8.1	103	23.8	45	1.45	1.31	0.37	14.63	147	16.93	146	(1.21)	319	49
4,900	85	2.4	347	9.8	330	1.90	2.03	0.89	7.88	238	(3.75)	246	6.88	220	40
5,000	80	9.8	63	20.0	87	1.81	1.90	1.39	2.68	290	4.44	218	2.05	277	42
4,150	128	2.6	339	9.9	325	N.A.	3.41‡	(0.21)‡	—		—		—		26
5,430	63	6.2	153	17.8	143	5.37	6.82	1.91**	10.89	208	(46.53)	437	10.38	169	45
1,725	408	11.5	45	16.0	186	3.14	5.22	0.69	16.36	120	(46.09)	435	7.28	217	10
4,920†	84	6.3	151	25.1	33	3.22	2.26	0.41	22.89	58	5.70	208	23.45	34	46
3,800	157	8.7	86	19.9	91	2.06	1.80	0.25	23.48	52	1.17	230	10.24	172	32
4,800	89	5.6	182	15.2	209	3.08	2.19	0.82	14.15	156	43.74	60	1.54	286	45
650	478	—	442	0.3	439	0.03	1.24	(1.23)‡	—		(33.22)	388	9.51	185	20
1,060	462	8.3	96	21.5	68	1.38	0.98	(0.02)	—		(38.69)	410	46.27	1	28
4,710	92	1.1	401	4.8	397	0.96	2.22	1.22	(2.37)	308	(39.43)	414	(7.28)	366	38
3,525	182	7.2	131	16.5	165	3.31	1.84	0.86	14.43	148	54.90	39	3.90	255	30
7,496	11	7.5	119	16.7	158	2.47	2.60	0.57	15.79	131	(19.40)	322	(3.98)	343	43
1,999	371	8.9	80	17.5	147	2.60	2.27	0.47	18.66	94	22.60	127	0.97	295	30
2,960	224	2.3	349	10.8	311	2.76	3.33	N.A.	—		17.52	140	—		45
3,844	155	5.3	195	16.4	168	3.42**	2.05	0.83	15.21	139	6.22	204	0.07	304	28
7,000	19	5.4	193	14.2	234	8.08	6.81	2.21	13.84	162	70.54	25	15.78	96	22
3,140	212	7.6	116	22.3	54	2.31	1.77	0.80	11.19	203	51.27	42	9.70	183	49
8,748	4	2.2	352	7.2	369	2.25	2.61	1.81	2.20	293	9.06	189	(1.16)	318	38
3,600	175	1.7	368	3.9	342	1.63	(1.20)	1.02	4.80	276	(21.07)	329	0.59	300	34
8,198	6	7.4	125	15.2	210	2.62	2.38	0.57	16.48	119	6.61	201	—		27
7,700	8	4.1	250	223.5	442	1.31	0.84	2.07	(4.47)	314	5.70	207	(18.21)	378	27
1,933†	381	9.6	68	27.3	18	16.37	8.78	2.73	19.62	83	10.03	182	15.55	100	20
6,002	40	6.9	135	20.6	76	1.88	1.73	0.43	15.90	128	5.18	211	14.16	124	46
6,198	37	0.3	431	0.9	433	0.20	2.54	0.91	(14.06)	328	(4.26)	247	9.88	179	22
5,764	49	0.9	414	3.0	419	1.16	(2.70)	1.22	(0.50)	299	(36.68)	399	5.10	240	32
5,800	48	2.7	333	8.7	346	1.49	1.80	1.57	(0.52)	300	16.75	147	1.69	282	45
4,053	132	0.2	434	0.7	436	0.21	4.78	0.54	(9.01)	322	(20.00)	326	9.36	186	45
2,076	357	—		—		(0.54)	1.08	1.62	—		(5.55)	254	(0.81)	315	49
2,456	303	11.8	40	22.2	56	0.70	N.A.	N.A.	—		—		—		44
10,621	1	2.6	337	11.8	287	2.96	1.89	1.42	7.62	241	91.46	17	18.80	63	23
3,534†	181	2.7	326	11.5	293	2.93	2.73	1.13	10.00	215	21.18	129	3.81	257	47

THE SECOND 500 LARGEST INDUSTRIALS

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDER EQUITY	
'81	'80		($000)	($000)	RANK	($000)	RANK	($000)	RANK
601	626	**Management Assistance** (New York)[3]	332,186	199,264	160	9,415**	235	93,519	174
602	680	**C.R. Bard** (Murray Hill, N.J.)	329,915	222,583	123	22,502	91	143,887	75
603	592	**Stewart-Warner** (Chicago)	328,821	234,976	107	15,374	148	178,212	36
604	639	**H.B. Fuller** (St. Paul)[17]	328,682	157,997	233	13,587	173	75,842	238
605	607	**Dibrell Brothers** (Danville, Va.)[16]	328,142	90,921	414	5,395	338	39,632	406
606	780	**Holly Sugar** (Colorado Springs, Colo.)[7]	326,599	158,251	232	14,193	157	90,088	183
607	619	**General Portland** (Dallas)[18]	326,152	324,321	42	9,081	241	185,457	31
608	666	**Condec** (Old Greenwich, Conn.)[4]	325,131	279,007	68	3,404**	376	79,743	222
609	629	**Mine Safety Appliances** (Pittsburgh)	324,237	221,200	126	20,577	100	126,961	99
610	646	**Katy Industries** (Elgin, Ill.)	323,822	315,398	49	17,621	128	168,530	50
611	658	**Athlone Industries** (Parsippany, N.J.)	323,646	203,412	153	14,020	162	58,895	312
612	641	**Triangle Industries** (Holmdel, N.J.)	320,397	145,393	266	1,371	417	53,540	338
613	605	**Amerace** (New York)	319,998	214,355	139	8,338	262	117,756	117
614	575	**Interpace** (Parsippany, N.J.)	319,938	233,704	108	8,897	244	150,679	68
615	652	**Florida Steel** (Tampa, Fla.)[3]	319,524	211,223	142	19,919	110	104,315	155
616	589	**SPS Technologies** (Jenkintown, Pa.)	319,099	218,274	132	22,375	92	121,638	108
617	651	**Standard Register** (Dayton, Ohio)	318,105	160,173	227	15,381	147	101,681	160
618	627	**Refinemet International** (Woonsocket, R.I.)[7,19]	316,880	207,088	147	4,077	365	22,033	473
619	726	**General American Oil Co. of Texas** (Dallas)[16]	315,532	524,077	11	52,100	6	419,868	3
620	688	**Crystal Oil** (Shreveport, La.)	315,386	409,256	20	1,186	422	69,791	264
621	572	**Manhattan Industries** (New York)[10]	314,865	145,863	261	5,175	345	48,216	371
622	671	**Medtronic** (Minneapolis)[6]	313,560	313,197	51	41,872	15	209,541	19
623	695	**Commerce Clearing House** (Chicago)	312,617	251,715	86	28,773	53	60,548	299
624	741	**Advanced Micro Devices** (Sunnyvale, Calif.)[7]	309,391	224,694	118	24,684	74	118,600	116
625	617	**National-Standard** (Niles, Mich.)[3]	309,280	189,437	174	1,110	424	106,835	147
626	718	**Goulds Pumps** (Seneca Falls, N.Y.)	308,674	205,874	150	25,737	67	107,937	143
627	648	**Lancaster Colony** (Columbus, Ohio)[16]	307,694	182,072	187	10,492	215	81,320	215
628	654	**Greif Bros.** (Delaware, Ohio)[13]	307,039	188,278	176	25,193	71	158,364	57
629	689	**Sealed Power** (Muskegon, Mich.)	304,218	221,887	125	26,597**	63	144,375	74
630	668	**Eastmet** (Cockeysville, Md.)[16]	304,148	207,125	146	178	440	75,381	241
631	649	**Pacific Lumber** (San Francisco)	303,231	288,440	59	50,782	7	209,934	18
632	635	**Republic** (Los Angeles)[4]	303,227	201,478	154	11,878	194	95,424	168
633	674	**Bassett Furniture Industries** (Bassett, Va.)[17]	301,079	200,923	158	25,175	72	170,952	44
634	647	**Ameron** (Monterey Park, Calif.)[17]	300,595	236,329	106	15,686	142	106,454	148
635	701	**Wolverine World Wide** (Rockford, Mich.)	299,133	152,395	242	15,541	145	88,187	192
636	663	**Manitowoc** (Manitowoc, Wis.)[16]	297,226	222,601	122	30,262	45	156,359	62
637	699	**Petrolite** (St. Louis)[13]	297,208	197,783	162	27,757	57	129,864	91
638	733	**Ocean Spray Cranberries** (Plymouth, Mass.)[14]	296,300	161,538	225	N.A.		42,370	394
639	746	**Pogo Producing** (Houston)	295,995	771,930	3	67,745	3	281,141	9
640	781	**ROLM** (Santa Clara, Calif.)[16]	294,576	206,914	148	23,777	80	121,834	106
641	732	**Alberto-Culver** (Melrose Park, Ill.)[3]	294,369	145,963	260	6,023	322	64,700	280
642	623	**Avondale Mills** (Sylacauga, Ala.)[14]	293,510	136,918	289	4,026	366	93,304	175
643	●	**Dominion Textile (USA)** (New York)[1]	293,093	193,314	170	2,723	390	21,920	474
644	●	**General Felt Industries** (Saddle Brook, N.J.)	293,059	158,749	230	6,636	306	26,653	457
645	669	**S.S. Pierce** (Dundee, N.Y.)[4]	291,236	129,747	304	2,729	389	34,430	429
646	681	**Millipore** (Bedford, Mass.)	290,327¶	251,100	87	10,579	214	151,181	65
647	597	**Hanna Mining** (Cleveland)	289,685	626,797	8	44,016	11	438,486	2
648	●	**Newpark Resources** (Metairie, La.)	289,149	268,495	74	22,972	84	124,748	102
649	673	**CHB Foods** (Terminal Island, Calif.)[16]	288,828	130,510	302	4,002	367	36,902	420
650	757	**Mohawk Data Sciences** (Parsippany, N.J.)[6]	287,370	268,242	75	19,118	113	157,193	60

N.A. available

●Indicates that a corporation was not among the 500 or the Second 500 in 1980.

**Reflects an extraordinary credit of at least 10%, see the explanations of "net income" and "earnings per share" on page 200.

†Average for the year, see the reference to "employees" on page 200.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[18] Owned by Lafarge Coppée 55%.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
5,629	57	2.8	322	10.1	321	1.16**	0.05	0.48**	9.22	223	(25.07)	353	13.75	129	44
6,135	38	6.8	140	15.6	198	2.30	1.55	0.68	12.96	178	49.79	47	0.68	299	38
7,100	16	4.7	231	8.6	347	2.38	2.86	1.49	4.79	277	4.89	213	7.59	213	34
3,300	199	4.1	251	17.9	141	2.97	2.16	0.54	18.59	96	103.67	11	9.81	182	28
1,730†	405	1.6	370	13.6	246	4.01	2.73	0.98	15.13	140	27.18	109	—		21
1,250	448	4.3	242	15.8	192	8.96	3.37	0.83**	26.86	34	(14.25)	298	18.42	64	20
2,300	321	2.8	323	4.9	396	N.A.	3.65	1.61	—		—		—		32
5,000	78	1.0	403	4.3	403	0.86**	0.68	0.07‡	28.51	28	(16.83)	311	8.61	197	34
6,300	32	6.3	150	16.2	178	5.43	4.34	0.77**	21.57	65	(15.54)	302	22.29	44	38
5,974	44	5.4	191	10.5	319	2.77	5.44**	1.27**	8.11	236	(27.76)	365	(1.60)	325	45
3,400†	189	4.3	243	23.8	44	5.16	3.04	(0.64)‡	—		32.41	97	27.53	18	33
2,500	289	0.4	425	2.6	421	0.62	1.85	0.23‡	10.42	212	0.20	232	1.74	281	33
5,159*	72	2.6	340	7.1	372	2.77	3.51	2.20	2.33	292	(8.96)	271	4.47	250	30
4,300	119	2.8	324	5.9	387	2.02	3.32	1.34	4.19	281	(7.05)	261	4.98	243	32
2,700	258	6.2	154	19.1	112	3.37	3.15	0.67	17.53	108	(7.33)	265	16.69	82	33
5,749	50	7.0	133	18.4	126	4.66	4.56	(0.66)	—		(32.13)	384	17.19	76	34
4,368	113	4.8	221	15.1	212	7.06	6.46	0.83	23.87	51	13.38	172	15.69	98	27
1,084	461	1.3	389	18.5	120	0.90	1.70**	0.20**	16.23	124	(60.76)	454	—		33
543	486	16.5	10	12.4	272	2.11	2.34	0.49**	15.72	132	(23.47)	341	18.18	67	10
688	476	0.4	428	1.7	428	0.06	0.48	(0.05)	—		(12.83)	290	32.48	9	29
5,200	69	1.6	371	10.7	312	1.53	(5.21)	0.79	6.83	254	81.21	21	1.68	284	23
4,792	91	13.4	23	20.0	89	2.70	2.52	0.21	29.10	25	(5.42)	253	10.78	163	38
5,100	75	9.2	73	47.5	2	3.20	2.56	0.56	19.04	90	96.45	15	11.40	157	27
9,915	2	8.0	108	20.8	73	1.55	1.47	N.A.	—		(48.91)	441	—		36
3,769	162	0.4	429	1.0	432	0.27	1.29	1.03	(12.53)	325	14.61	160	(2.77)	330	33
3,900	150	8.3	95	23.8	43	1.47	1.12	0.21	21.48	66	(6.04)	258	—		45
5,000	79	3.4	297	12.9	261	2,10	1.51	0.72	11.30	199	32.53	96	3.14	270	32
4,000†	133	8.2	98	15.9	189	1.88[20]	1.60[20]	0.44[20]	15.63	134	(30.92)	379	—		26
4,533†	102	8.7	85	18.4	124	5.50**	2.45	1.17	16.74	116	38.63	70	14.45	121	40
2,179	335	0.1	441	0.2	440	0.04	2.27	N.A.			(43.85)	430	—		33
4,000†	135	16.7	9	24.2	39	2.09	1.74	0.42	17.41	111	(15.95)	305	20.87	53	45
5,000	81	3.9	261	12.4	267	4.05	4.44	(21.29)[8]‡	—		(5.06)	249	1.58	285	27
6,800	24	8.4	94	14.7	221	3.60	3.10	1.96	6.27	260	29.04	103	(3.57)	339	25
3,200	203	5.2	202	14.7	219	6.04	5.03	1.83	12.68	181	5.81	205	11.68	154	32
7,209	13	5.2	204	17.6	145	2.44	2.29	0.41	19.53	85	3.06	224	10.15	174	31
3,900	149	10.2	59	19.4	107	2.82	2.36	0.41	21.27	68	20.44	131	30.87	11	45
2,100	348	9.3	71	21.4	69	2.33	2.10	0.35	20.87	72	(12.45)	287	22.27	45	28
2,100	346	—		—		N.A.	N.A.	N.A.	—		—		—		20
200	498	22.9	4	24.1	40	2.60	2.13	N.A.	—		(16.66)	308	12.62	141	10
4,414	109	8.1	104	19.5	102	1.39	1.09	N.A.	—		(31.55)	381	—		36
4,555	101	2.0	360	9.3	335	1.56	2.61	1.12	3.37	288	(10.79)	281	(1.43)	321	43
4,482	106	1.4	382	4.3	401	1.82	3.13	2.47	(3.01)	311	8.73	192	1.11	291	22
2,700†	263	0.9	410	12.4	271	N.A.	N.A.	N.A.	—		—		—		22
2,790	243	2.3	350	24.9	34	669.00	470.00	N.A.	—		—		—		25
2,156	337	0.9	409	7.9	356	2.21	1.93	0.76	11.26	201	—		—		20
3,860	154	3.6	281	7.0	374	0.79	1.40	0.34	8.80	227	(38.24)	409	1.45	287	38
7,715	7	15.2	12	10.0	324	4.94	4.34	3.35	3.96	282	8.34	194	(0.15)	308	10
2,950	226	7.9	109	18.4	125	1.74	1.16	0.14	28.66	26	(27.14)	362	21.51	48	10
3,500	183	1.4	381	10.8	310	1.28	0.35	0.30‡	15.61	135	(15.60)	303	5.96	232	20
5,300	65	6.7	143	12.2	279	1.60	1.67	0.08[8]	34.93	9	(40.53)	419	(3.86)	342	44

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[19] Name changed from Ag-MET September 18, 1980.

[20] Class A and B combined

THE SECOND 500 LARGEST INDUSTRIALS

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS EQUITY	
'81	'80		($000)	($000)	RANK	($000)	RANK	($000)	RANK
651	682	**U.S. Tobacco** (Greenwich, Conn.)	285,769	280,862	66	43,012	12	185,534	30
652	662	**Texas Industries** (Dallas)[1]	285,003	346,677	31	30,411	44	150,506	69
653	690	**Chesapeake Corp. of Virginia** (West Point, Va.)	282,569	278,772	69	26,230	66	164,656	52
654	●	**Marcade Group** (Jersey City, N.J.)[10]	280,973¶	112,214	340	3,444**	374	29,813	447
655	775	**Hon Industries** (Muscatine, Iowa)	280,657	173,000	204	19,050	116	86,453	195
656	708	**Lance** (Charlotte, N.C.)	280,386	143,685	270	22,874	86	111,590	133
657	716	**Hesston** (Hesston, Kans.)	280,144	166,401	213	3,792	370	50,687	357
658	703	**Omark Industries** (Portland, Ore.)[16]	280,076	254,228	83	23,045	83	133,187	88
659	664	**Compugraphic** (Wilmington, Mass.)[3]	278,145	219,916	128	(6,662)	476	89,934	184
660	799	**Scientific-Atlanta** (Atlanta)[16]	277,292	197,210	163	19,005	118	109,767	138
661	603	**Bird & Son** (East Walpole, Mass.)	276,624	151,300	249	(27,060)	492	77,161	230
662	596	**Skyline** (Elkhart, Ind.)[1]	276,572	136,109	291	6,684	304	114,500	127
663	742	**Computervision** (Bedford, Mass.)	275,293	231,796	110	31,763	38	144,993	72
664	683	**Mark Controls** (Evanston, Ill.)	274,437	178,291	192	4,932	349	64,904	278
665	692	**Bliss & Laughlin Industries** (Oak Brook, Ill.)	273,632	182,978	184	20,208	106	117,382	119
666	696	**Dinner Bell Foods** (Defiance, Ohio)[16]	272,012	38,891	497	2,485	395	23,438	469
667	704	**Ti-Caro** (Gastonia, N.C.)[3]	271,840	159,686	228	17,402	130	113,326	129
668	697	**SFN Companies** (Glenview, Ill.)[6]	270,813	237,410	103	36,091	24	178,447	35
669	720	**Russell** (Alexander City, Ala.)	270,426	200,983	157	24,037	77	122,853	105
670	827	**Dataproducts** (Woodland Hills, Calif.)[7]	270,125	238,262	101	17,207	132	151,497	64
671	650	**Allied Products** (Chicago)	269,662	152,214	245	597	434	51,394	351
672	679	**King-Seeley Thermos** (Prospect Heights, Ill.)[21]	268,700	185,475	181	20,316	103	128,187	94
673	698	**Thomas & Betts** (Raritan, N.J.)	268,600	227,913	116	33,363	34	177,595	39
674	694	**Southdown** (Houston)	268,164	297,110	56	36,275	23	142,415	79
675	931	**Nortek** (Cranston, R.I.)	267,883	174,524	199	9,600	230	61,661	296
676	761	**Bairnco** (New York)[22]	267,697	288,090	60	13,601	172	86,520	194
677	864	**U.S. Sugar** (Clewiston, Fla.)[3]	265,745[8]	324,436	41	42,417[8]	13	220,148	15
678	684	**P.H. Glatfelter** (Spring Grove, Pa.)	265,540	194,304	167	16,502	136	145,195	71
679	745	**John Blair** (New York)	265,303	145,772	262	13,637	171	76,106	236
680	778	**Elcor** (Midland, Tex.)[16]	265,145	133,317	298	1,957	405	41,956	396
681	727	**Donaldson** (Minneapolis)[4]	263,921	159,500	229	12,631	187	90,359	182
682	691	**CCI** (Tulsa)[6]	263,012	190,676	173	10,158	219	72,004	253
683	670	**Monogram Industries** (Santa Monica, Calif.)[16]	262,626	242,780	95	12,844	183	89,506	189
684	736	**Leggett & Platt** (Carthage, Mo.)	262,575	122,331	320	11,953	193	57,101	320
685	709	**Faberge** (New York)	262,252	195,007	166	284	438	120,971	111
686	714	**Lenox** (Lawrenceville, N.J.)	260,696	187,288	179	20,672	99	126,991	98
687	665	**UNC Resources** (Falls Church, Va.)	259,428	400,602	21	6,949	297	170,303	45
688	700	**Burndy** (Norwalk, Conn.)	256,764	217,594	134	32,839	36	133,422	86
689	725	**Overhead Door** (Dallas)	254,080	137,383	286	3,064	382	76,813	232
690	712	**Guilford Mills** (Greensboro, N.C.)[16]	253,377	132,299	299	20,682	98	86,408	197
691	660	**Salant** (New York)[17]	253,315¶	145,679	264	(6,508)	475	43,549	388
692	735	**Herman Miller** (Zeeland, Mich.)[1]	252,740	187,334	178	13,881	165	83,830	204
693	734	**Laclede Steel** (St. Louis)	252,722	137,432	285	3,935	368	62,745	290
694	756	**Betz Laboratories** (Trevose, Pa.)	252,545	165,650	216	28,815	51	126,799	100
695	693	**Dentsply International** (York, Pa.)	251,344	168,075	209	305	437	67,322	272
696	755	**Shaw Industries** (Dalton, Ga.)[16]	250,584	141,594	276	8,421	261	47,804	373
697	794	**Robbins & Myers** (Dayton, Ohio)[14]	250,315	150,893	250	13,429	176	68,652	270
698	532	**Toro** (Minneapolis)[4]	250,293	155,793	238	(13,068)	484	54,071	334
699	792	**Valmac Industries** (Memphis)[16]	248,839	137,959	284	845	430	24,587	464
700	752	**Kimball International** (Jasper, Ind.)[16]	248,450	145,727	263	15,111	150	98,515	166

●Indicates that a corporation was not among the 500 or the Second 500 in 1980

**Reflects an extraordinary credit of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

†Average for the year, see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

¶Includes sales from discontinued operations of at least 10%, see explanation of "sales" on page 200

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			EARNINGS PER SHARE GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
3,476†	185	15.1	14	23.2	48	4.72	4.16	1.23	14.39	152	28.45	106	14.51	119	21
3,200	205	10.7	52	20.2	84	4.23	5.81	0.85	17.41	110	(13.02)	291	14.85	112	32
2,710	256	9.3	72	15.9	187	4.22	3.83	0.65	20.57	75	8.94	191	15.48	103	26
6,300	35	1.2	394	11.6	292	0.38**	0.47**	1.31	(11.64)	324	24.16	119	(18.71)	380	23
4,400	110	6.8	141	22.0	59	1.79	1.48	0.18	25.82	38	(2.49)	243	21.79	47	25
5,163	71	8.2	101	20.5	78	1.83	1.56	0.54	12.98	176	17.50	141	6.66	223	20
3,077†	217	1.4	384	7.5	364	0.78	(0.19)	1.11	(3.47)	313	(51.29)	445	(4.12)	344	45
4,600	99	8.2	97	17.3	152	3.22	3.57	0.41	22.89	57	(23.65)	343	15.55	101	34
4,334	114	—		—		(1.33)	1.72	0.25**	—		(62.92)	455	8.69	196	45
5,223	67	6.9	138	17.3	151	0.90	0.66	0.05	33.51	14	45.45	56	38.59	3	36
2,230	327	—		—		(6.43)	(0.83)	1.32	—		(37.52)	403	4.92	244	29
2,900	235	2.4	345	5.8	388	0.60	0.54	1.28	(7.30)	321	14.79	159	(9.93)	370	37
3,800	159	11.5	44	21.9	63	1.16	0.90	N.A.	—		(19.25)	321	—		44
4,942	83	1.8	367	7.6	363	0.88	1.61	0.28	12.13	189	(38.12)	407	9.98	176	38
2,870	237	7.4	123	17.2	153	3.03	2.58	0.67	16.29	123	35.82	83	15.98	92	33
1,700	411	0.9	411	10.6	314	1.53	2.44	0.77	7.11	249	(1.13)	237	—		20
5,450	62	6.4	148	15.4	205	3.16	2.88	0.94	12.89	180	31.38	98	16.75	80	22
2,635†	272	13.3	24	20.2	83	3.09	2.74	0.56	18.63	95	(30.58)	376	12.22	148	27
7,180	14	8.9	81	19.6	100	2.04	1.78	0.11	33.91	10	45.61	55	29.65	14	23
4,900	86	6.4	149	11.4	300	2.27	1.01	(1.66)	—		(42.99)	427	17.28	73	44
4,300	115	0.2	433	1.2	430	0.20	(0.82)	1.01	(14.95)	329	13.18	173	0.73	297	45
3,900	146	7.6	117	15.8	191	N.A.	N.A.	N.A.	—		—		—		34
3,100	216	12.4	32	18.8	115	4.31	4.22	0.99	15.85	129	17.39	143	11.18	160	36
1,300†	445	13.5	21	25.5	30	5.17	4.53‡	3.08**	5.32	271	(0.63)	234	17.65	70	32
3,420	188	3.6	287	15.6	201	2.75	1.41	(0.32)‡	—		49.32	49	2.72	273	34
2,791†	242	5.1	208	15.7	195	2.57	2.21	0.35	22.06	62	57.46	36	15.65	99	36
5,600†	59	16.0	11	19.3	109	8.66§	6.53	1.51	19.08	88	(15.37)	301	12.56	143	20
2,088	352	6.2	156	11.4	299	3.70	4.83	0.25	30.93	23	7.06	198	27.36	19	26
2,200	328	5.1	205	17.9	140	3.65	3.13	0.24‡	31.28	21	44.37	57	14.59	118	27
2,036	365	0.7	419	4.7	399	0.55	1.95**	(25.89)‡	—		(34.74)	393	—		29
3,643	169	4.8	223	14.0	238	2.45	1.60	0.39	20.17	79	15.15	154	10.20	173	45
3,027	220	3.9	267	14.1	235	1.62	1.57	(1.55)‡	—		40.00	67	12.43	145	40
3,900	147	4.9	218	14.3	229	6.71	8.19	(0.99)‡	—		25.94	116	16.32	87	34
5,300	66	4.6	233	20.9	72	3.14	2.06	0.52	19.70	81	85.49	20	14.85	113	25
2,800	240	0.1	439	0.2	441	0.05	0.38	1.14	(26.85)	332	(28.10)	367	2.99	271	43
4,300	120	7.9	110	16.3	174	4.64	4.26	1.35	13.14	172	16.26	151	5.69	234	46
4,470	108	2.7	331	4.1	408	0.65	(3.20)	0.19	13.09	174	(57.92)	451	(2.69)	329	34
4,698	95	12.8	29	24.6	37	2.64	1.93	0.30	24.29	48	1.62	228	16.62	83	36
3,900†	148	1.2	395	4.0	410	0.55	0.82	0.98	(5.61)	316	(18.59)	318	0.05	305	26
2,152	338	8.2	100	23.9	42	4.20	4.54	0.53	23.00	55	(24.45)	346	15.89	93	22
6,473	27	—		—		(2.02)	0.20	1.01	—		37.12	75	3.29	269	23
3,288	202	5.5	188	16.6	163	3.76	3.53	0.38	25.76	39	26.80	113	25.83	23	25
2,650	269	1.6	373	6.3	382	1.78	(0.44)	2.07**	(1.50)	304	11.11	177	11.87	152	33
2,200	329	11.4	46	22.7	52	1.83	1.50	0.24	22.52	60	26.87	112	8.28	203	28
4,000	137	0.1	438	0.5	438	0.07	1.35	1.04	(23.65)	331	14.34	163	1.06	292	38
2,800	241	3.4	301	17.6	146	1.65	1.10	0.46	13.62	167	28.95	105	0.73	298	22
4,391	112	5.4	192	19.6	101	5.66	4.58	0.61	24.95	46	(38.97)	413	16.96	79	36
2,652†	267	—		—		(2.66)	0.90	0.76	—		(43.11)	428	(4.85)	350	45
3,962	141	0.3	430	3.4	418	0.37	(3.55)	(0.21)**	—		(26.94)	361	12.56	142	20
5,200	70	6.1	161	15.3	206	2.88	2.91	N.A.	—		27.61	107	—		47

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[21] Wholly owned by Household International.

[22] Named changed from Keene April 9, 1981.

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
701	871	**Puritan Fashions** (New York)	248,417	88,726	422	11,757	198	31,020	442
702	677	**Bibb** (Macon, Ga.)[7]	246,002	140,903	277	(7,917)	477	61,370	294
703	754	**American Sterilizer** (Erie, Pa.)	244,464	143,359	273	11,541	201	92,750	176
704	737	**Grow Group** (New York)[16]	243,480	122,677	318	5,227	343	42,939	390
705	715	**Crompton & Knowles** (New York)	243,412	143,480	271	8,571	257	74,889	242
706	750	**Dixie Yarns** (Chattanooga, Tenn.)	243,177	89,939	417	5,222	344	58,547	316
707	685	**Wean United** (Pittsburgh)	242,895	177,326	195	2,991	384	57,296	319
708	766	**RTE** (Waukesha, Wis.)	242,089	117,832	328	6,535	310	50,708	356
709	661	**Redman Industries** (Dallas)[7]	241,879	93,844	396	7,195	291	52,823	339
710	776	**Brunswick Pulp & Paper** (Brunswick, Ga.)	240,663	328,558	39	6,119	318	156,398	61
711	729	**Kaiser Cement** (Oakland, Calif.)	240,124	496,791	12	21,738	96	223,845	14
712	713	**Gleason Works** (Rochester, N.Y.)	239,936	191,394	172	8,892	245	110,970	136
713	730	**Stanley Home Products** (Westfield, Mass.)	239,412	166,001	214	16,549	135	91,689	177
714	918	**Inexco Oil** (Houston)	238,738	785,112	3	31,921	37	235,525	12
715	743	**McQuay-Perfex** (Minneapolis)	238,030	137,358	287	9,726	225	66,589	275
716	764	**Carter-Wallace** (New York)[7]	236,958	218,332	131	11,555	200	144,759	73
717	793	**Leslie Fay** (New York)[6]	236,936	87,387	425	8,214	266	49,373	363
718	771	**Anthony Industries** (City of Commerce, Calif.)	236,587	110,973	345	3,377	377	31,050	441
719	841	**Cooper Laboratories** (Palo Alto, Calif.)[13]	236,237	301,216	55	14,325	153	111,925	132
720	768	**Affiliated Publications** (Boston)	236,073	125,647	313	14,199	156	82,830	211
721	632	**Homestake Mining** (San Francisco)	235,581	351,932	27	28,822	50	294,274	8
722	657	**Howell** (Houston)	235,304	177,462	193	8,699	250	72,394	250
723	856	**Mary Kay Cosmetics** (Dallas)	235,296	100,976	376	24,155	76	61,952	293
724	719	**National Grape Co-Op. Assoc.** (Westfield, N.Y.)[14]	235,250	138,147	283	N.A.[9]		46,583	366
725	717	**Alabama By-Products** (Birmingham, Ala.)	234,994	267,360	76	14,050	161	129,165	93
726	759	**Pope & Talbot** (Portland, Ore.)	234,768	216,115	136	2,711	391	106,028	151
727	642	**Beker Industries** (Greenwich, Conn.)	234,588	342,935	32	(4,856)	467	115,289	124
728	783	**LeaRonal** (Freeport, N.Y.)[12]	234,205	41,413	496	8,038	272	29,434	450
729	762	**Blue Chip Stamps** (Los Angeles)	233,980	314,656	50	27,626	58	169,241	48
730	787	**Four-Phase Systems** (Cupertino, Calif.)	233,725	215,503	137	7,148	292	120,969	112
731	710	**Esterline** (Darien, Conn.)[13]	233,717	167,645	211	19,684	111	90,625	180
732	739	**Thomas Industries** (Louisville, Ky.)	233,565	133,548	296	12,246	190	82,930	209
733	770	**Noxell** (Cockeysville, Md.)	233,112	108,760	350	16,864	133	84,935	201
734	774	**Tampax** (Lake Success, N.Y.)	232,877	206,222	149	42,162	14	169,356	47
735	655	**Imperial Sugar** (Sugar Land, Tex.)	232,838	56,914	489	13,136	178	38,535	410
736	728	**Commercial Shearing** (Youngstown, Ohio)[13]	232,270	173,594	202	13,085	180	112,555	131
737	785	**Justin Industries** (Fort Worth)	232,160	208 423	144	5,430	337	76,358	235
738	722	**Huffy** (Miamisburg, Ohio)[16]	231,983	134,341	293	6,211	315	48,422	367
739	839	**Thermo Electron** (Waltham, Mass.)	230,913	188,932	175	8,850	247	84,526	202
740	687	**Philips Industries** (Dayton, Ohio)[7]	229,148	112,338	339	8,016	273	56,241	322
741	753	**Standard Products** (Cleveland)[16]	228,984	106,425	361	5,665	333	43,080	389
742	790	**Cubic** (San Diego, Calif.)[3]	228,244	133,345	297	11,029	208	62,210	292
743	748	**International Banknote** (New York)	227,627	163,911	221	9,803	223	47,264	376
744	740	**Barber-Greene** (Aurora, Ill.)[14]	227,411	162,324	223	3,060	383	66,565	276
745	951	**Sealaska** (Juneau, Alaska)	225,532	348,499	29	N.A.		N.A.	
746	802	**Kollmorgen** (Stamford, Conn.)	224,090	140,783	278	11,334	202	69,978	263
747	756	**Pentair** (St. Paul)	223,982	154,917	240	8,153	269	58,469	317
748	858	**Valley Industries** (St. Louis)[17]	222,766	151,766	247	14,468	152	71,144	258
749	744	**McNeil** (Akron, Ohio)	221,871	162,757	222	5 527	335	76,520	233
750	925	**Galveston-Houston** (Houston)	221,713	244,107	92	22,611	88	96,837	167

N.A. Not available

*Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

†Average for the year; see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
EMPLOYEES		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
1,300	444	4.7	226	37.9	6	2.83	(0.91)	1.44**	6.99	251	104.56	9	3.54	262	23
6,000	42	—		—		(4.96)	1.14	(4.26)‡	—		16.22	153	1.76	280	22
3,694	166	4.7	227	12.4	268	1.29	1.01	0.64	7.26	247	48.90	51	(0.12)	307	38
2,100	341	2.1	359	12.2	278	0.91	1.06	0.29	12.12	190	(37.15)	401	7.36	215	28
2,534	285	3.5	290	11.4	296	2.51	2.22	0.69	13.78	163	38.05	74	10.59	165	28
4,300	117	2.1	358	8.9	343	5.41	5.09	2.30	8.93	225	—		—		22
2,855	238	1.2	393	5.2	393	0.77	(0.13)	(1.11)‡	—		(22.11)	333	(0.20)	309	45
2,727†	252	2.7	330	12.9	262	1.13	0.76	0.33	13.10	173	(5.31)	251	2.31	275	36
3,200	204	3.0	313	13.6	245	0.76	1.32	0.69	0.97	296	49.90	46	(5.58)	355	37
1,311	442	2.5	342	3.9	411	N.A.	N.A.	N.A.	—		—		—		26
1,695	415	9.1	77	9.7	331	2.89	3.45	0.90	12.37	184	(10.89)	282	9.63	184	32
4,700	93	3.7	277	8.0	355	1.72	3.26	1.05	5.06	274	(17.18)	312	(4.19)	345	45
4,200	126	6.9	136	18.0	136	6.16	5.55	2.13	11.20	202	(8.14)	268	3.90	254	43
862	470	13.4	22	13.6	248	1.32	0.94	0.22**	19.62	82	(23.33)	340	20.51	56	10
3,600	176	4.1	255	14.6	224	2.37	2.43	0.56‡	15.52	137	(13.24)	292	12.20	149	45
3,300	197	4.9	219	8.0	356	1.49	1.05	1.42	0.48	297	(5.42)	252	(3.15)	335	43
2,300	323	3.5	293	16.6	160	2.30	0.84	0.92	9.60	219	62.46	29	5.47	235	23
2,700	261	1.4	379	10.9	309	1.22	1.14	0.71	5.56	267	(16.39)	307	(3.06)	332	47
4,600	98	6.1	164	12.8	264	3.00	11.27**	0.78	14.42	149	(14.21)	297	2.60	274	42
2,330	320	6.0	168	17.1	154	2.74	2.49	N.A.	—		13.79	170	—		27
2,784	245	12.2	36	9.8	329	1.69	5.96	0.18**	25.10	45	(41.91)	422	23.55	32	10
363	492	3.7	278	12.0	281	1.54	2.33	0.09**	32.84	16	(48.62)	440	—		29
1,400	438	10.3	57	39.0	5	1.65	1.05	0.09	33.76	12	26.98	110	16.44	85	43
1,311	441	—		—		N.A.	N.A.	N.A.	—		—		—		20
2,906	229	6.0	170	10.9	308	8.00	3.95	3.29	9.29	222	14.23	165	—		10
1,700	412	1.2	399	2.6	422	0.45	1.80	0.61	(3.00)	310	(19.01)	320	11.14	161	26
1,100	457	—		—		(0.41)	2.49	N.A.	—		(65.08)	456	—		28
268	495	3.4	295	27.3	17	1.66	1.24	0.19	24.20	49	(25.30)	356	18.23	65	28
3,300†	201	11.8	39	16.3	171	5.33	3.94	1.69	12.17	187	38.12	73	8.30	202	20
4,511	103	3.1	311	5.9	386	1.26	1.06	N.A.	—		52.38	41	—		44
3,650	168	8.4	93	21.7	65	2.32	2.51	0.11**	35.65	8	(9.83)	275	23.21	35	45
3,300†	198	5.2	201	14.8	218	1.84	1.62	0.64	11.14	205	46.30	52	4.74	248	36
1,250	449	7.2	127	19.9	92	3.45	3.01	0.93	14.01	159	38.59	71	0.54	301	43
2,600	276	18.1	6	24.9	35	3.74	3.22	1.99	6.51	258	18.02	137	(3.22)	336	26
641	480	5.6	179	34.1	11	64.89	36.56	N.A.	—		—		—		20
2,966	223	5.6	181	11.6	289	1.37	1.51	0.36	14.30	154	9.17	187	20.94	51	45
4,850	87	2.3	348	7.1	370	1.38	2.09	0.71	6.87	253	(10.13)	276	—		32
3,137	213	2.7	332	12.8	263	1.38	2.10	0.15	24.85	47	(22.15)	334	14.33	122	47
3,000	221	3.8	269	10.5	318	1.90	1.88	0.35	18.43	99	(30.89)	378	(0.04)	306	45
3,444	187	3.5	292	14.3	232	1.32	1.28	0.65	7.34	245	104.11	10	(0.42)	311	34
4,200	125	2.5	344	13.1	255	4.50	(2.19)	2.01	8.39	233	58.62	34	3.39	268	40
3,800	158	4.8	222	17.7	144	2.79	2.06	0.54	17.85	107	119.11	6	15.80	95	36
4,400	111	4.3	246	20.7	74	0.60	0.10	(0.27)‡	—		170.00	2	17.20	75	27
2,993	222	1.3	386	4.6	400	1.34	2.05	0.24**	18.77	92	(5.61)	255	13.72	131	45
900	466	—		—		N.A.	3.77**	N.A.	—		—		—		20
4,500	105	5.1	209	16.2	182	1.30	1.23	(0.40)‡	—		(12.64)	288	25.31	25	36
2,400	315	3.6	283	13.9	239	2.81	4.17	0.17	32.38	18	9.16	188	—		26
1,620	420	6.5	146	20.3	80	1.65	0.59	N.A.	—		(8.61)	269	—		34
4,000	134	2.5	343	7.2	368	2.36	1.96	1.67	3.52	287	(0.71)	235	5.03	242	45
2,400	313	10.2	58	23.3	47	3.89	2.16	(0.01)	—		(19.86)	324	—		45

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDE EQUITY ($000)	RAN
751	706	**Portec** (Oak Brook, Ill.)	221,180	120,787	322	7,902	275	70,457	261
752	786	**Duplex Products** (Sycamore, Ill.)[13]	221,018	92,659	401	9,543	231	58,899	311
753	840	**Early California Industries** (Los Angeles)[7]	220,815	156,241	237	2,272	398	27,576	454
754	767	**Bobbie Brooks** (Cleveland)[6]	220,541¶	87,005	426	(2,388)	456	29,655	449
755	707	**Western Pacific Industries** (New York)	220,265	242,875	93	30,097	46	116,526	120
756	731	**Chelsea Industries** (Boston)[3]	219,630¶	106,014	363	3,641	372	44,673	387
757	795	**Macmillan Ring-Free Oil** (New York)	218,525	45,462	495	864	429	11,582	492
758	848	**GCA** (Bedford, Mass.)	218,490	167,787	210	21,911	94	95,169	170
759	801	**Smithfield Foods** (Alexandria, Va.)[6]	218,255	38,014	498	873	427	12,292	488
760	798	**BIC Pen** (Milford, Conn.)	217,707	150,808	251	8,228	265	83,440	208
761	807	**Park-Ohio Industries** (Cleveland)	216,458	184,963	182	11,855	195	89,773	185
762	631	**Lamson & Sessions** (Cleveland)	215,975	164,869	219	(8,995)	480	59,176	307
763	898	**Valmont Industries** (Valley, Neb.)	215,696	120,490	324	10,143	220	46,885	379
764	902	**Bastian Industries** (New York)[4,23]	215,191	117,156	329	2,353**	397	20,570	478
765	747	**Rochester & Pittsburgh Coal** (Indiana, Pa.)	214,279	205,583	151	12,120	192	82,871	210
766	782	**Loctite** (Newington, Conn.)[16]	213,912	181,225	188	10,377	217	121,125	110
767	896	**Loral** (New York)[7]	212,628	216,315	135	20,548	101	135,920	84
768	●	**Reynolds & Reynolds** (Dayton, Ohio)[3]	212,236	138,810	282	7,118	293	79,925	221
769	826	**Mohawk Rubber** (Hudson, Ohio)	210,986	100,411	378	8,460	260	51,709	349
770	763	**Twin Disc** (Racine, Wis.)[16]	210,256	146,250	259	8,578	256	81,433	214
771	813	**American Business Products** (Atlanta)	209,817	88,186	424	7,062	294	51,880	348
772	809	**CTS** (Elkhart, Ind.)	209,572	142,126	274	13,106	179	116,034	122
773	769	**California Portland Cement** (Los Angeles)[6]	208,533	324,816	40	22,651‡	87	193,062	24
774	●	**Tandem Computers** (Cupertino, Calif.)[3]	208,397	255,971	81	26,549	64	204,810	20
775	861	**Towle Manufacturing** (Boston)	208,393	177,421	194	10,834	211	54,758	329
776	837	**Phoenix Steel** (Claymont, Del.)	207,469	156,462	235	2,012**	403	4,339	495
777	791	**Union** (Verona, Pa.)[16]	205,870	154,075	241	4,554	357	68,788	268
778	996	**Coachmen Industries** (Middlebury, Ind.)	205,510	68,915	467	2,095	402	35,140	425
779	738	**Brown & Sharpe Mfg.** (North Kingstown, R.I.)	205,356	171,238	206	6,040	321	88,561	191
780	789	**Halstead Industries** (Zelienople, Pa.)	205,108	104,618	367	(3,534)	461	48,295	370
781	880	**Stepan Chemical** (Northfield, Ill.)	204,522	176,068	196	6,545	309	53,888	336
782	847	**Salem Carpet Mills** (Winston-Salem, N.C.)	204,403	62,805	480	(1,616)	451	20,752	477
783	814	**Vermont American** (Louisville, Ky.)	203,940	145,653	265	12,565	188	79,986	220
784	838	**W.A. Krueger** (Scottsdale, Ariz.)	203,259	98,459	384	7,833	278	42,671	391
785	797	**Wynn's International** (Fullerton, Calif.)	202,895	139,815	281	10,646	212	73,786	247
786	842	**Oglebay Norton** (Cleveland)	202,293	283,801	63	23,919	79	141,119	82
787	849	**United Industrial** (New York)	202,148	117,873	327	11,076	207	54,257	332
788	808	**NIBCO** (Elkhart, Ind.)	201,165	157,109	234	8,886	246	64,140	283
789	870	**Work Wear** (Cleveland)	200,087	141,805	275	4,340	361	48,889	365
790	828	**Commodore** (Syracuse, Ind.)[16]	199,302	56,239	491	4,802**	353	5,486	494
791	805	**Brush Wellman** (Cleveland)	199,131	195,676	165	19,294	112	127,130	97
792	818	**American Ship Building** (Tampa, Fla.)[3]	196,981	132,217	300	14,134	158	58,672	314
793	867	**Wausau Paper Mills** (Wausau, Wis.)[14]	196,544	111,093	344	2,650	392	34,743	427
794	937	**Unifi** (Greensboro, N.C.)[16]	196,310	65,992	473	7,644**	282	24,483	465
795	751	**Champion Home Builders** (Dryden, Mich.)[12]	195,293	57,497	488	(1,599)	450	28,195	452
796	843	**Van Dorn** (Cleveland)	195,168	108,450	353	6,692	302	54,644	331
797	836	**Cagle's** (Atlanta)[7]	195,073	49,620	493	(1,291)	448	14,216	485
798	543	**Curtiss-Wright** (Wood-Ridge, N.J.)	194,929	293,871	58	85,308	2	203,063	21
799	862	**Stride Rite** (Cambridge, Mass.)[17]	194,829	112,062	342	9,165	238	56,179	323
800	832	**Pauley Petroleum** (Los Angeles)[14]	193,937	107,679	356	(3,737)	463	22,035	472

●Indicates that a corporation was not among the 500 or the Second 500 in 1980

**Reflects an extraordinary credit of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

†Average for the year, see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

¶Includes sales from discontinued operations of at least 10%, see explanation of "sales" on page 200

[23] Name changed from Nytronics November 24, 1980.

		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
				STOCKHOLDERS'					GROWTH RATE				1971-81		
EMPLOYEES		SALES		EQUITY					1971-81		1981		AVERAGE		INDUSTRY
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
2,460	302	3.6	288	11.2	304	2.07	2.35	0.56	13.97	160	(17.60)	313	13.06	138	37
2,017	366	4.3	245	16.2	181	2.49	2.89	0.35	21.68	64	5.43	210	16.53	84	27
1,300	443	1.0	404	8.2	352	0.81	1.32	(1.36)‡	—		20.00	132	7.92	208	20
2,500	290	—		—		(0.52)	(1.16)	0.51‡	—		(30.77)	377	(17.07)	377	23
4,000	140	13.7	20	25.8	29	12.95	11.68	1.90**	21.16	70	14.44	162	15.18	108	38
2,700	257	1.7	369	8.2	353	1.61	1.05	0.91	5.87	266	34.63	87	3.89	256	30
268	494	0.4	427	7.5	365	(0.08)	0.22	(0.29)	—		—		—		29
2,652	268	10.0	61	23.0	50	2.60	1.81	0.26**	25.89	37	(46.17)	436	24.13	28	45
2,070	359	0.4	426	7.1	371	0.45	1.90	1.80**	(12.94)	326	17.83	139	—		20
2,300	325	3.8	273	9.9	328	1.27	1.91	0.92	3.28	289	(33.66)	389	(1.08)	316	47
2,600	278	5.5	190	13.2	254	2.14	2.25	0.59	13.75	164	(37.82)	404	20.57	55	34
2,446	306	—		—		(1.71)	(2.95)	0.30‡	—		(37.06)	400	4.82	245	37
1,840	391	4.7	230	21.6	66	3.93	2.35	0.35	27.36	32	63.43	28	13.42	133	34
2,787	244	1.1	400	11.4	297	0.82**	1.79	(104.53)‡	—		(25.00)	351	0.45	302	45
2,715	255	5.7	178	14.6	223	7.75	8.95	0.43	33.53	13	—		—		10
2,572	281	4.9	220	8.6	348	1.05	2.65	0.29	13.73	165	(23.58)	342	7.05	219	28
3,900	151	9.7	67	15.1	213	2.00	1.84	(0.37)‡	—		(20.88)	328	35.04	6	36
3,329	196	3.4	302	8.9	344	1.51	2.33	0.90	5.31	272	1.62	229	(1.12)	317	27
1,615	422	4.0	258	16.4	170	4.24	2.63	1.50	10.95	207	23.43	122	7.80	211	30
2,907	228	4.1	256	10.5	316	2.38	2.89	1.16	7.45	243	7.48	197	11.40	158	45
3,400	191	3.4	300	13.6	247	1.87	2.15	0.52	13.65	166	(9.61)	274	4.72	249	27
6,826†	22	6.3	152	11.3	302	2.95	2.33	1.19	9.50	221	35.01	85	8.23	204	36
1,500	429	10.9	50	11.7	288	2.68‡	4.29	1.08	9.51	220	19.41	134	11.08	162	32
2,730	250	12.7	30	13.0	260	0.72	0.35	N.A.	—		9.54	184	—		44
2,400	312	5.2	203	19.8	94	2.55	2.20	0.60	15.57	136	16.43	149	16.31	88	46
1,800	396	1.0	408	46.4	3	0.05**	(0.03)**	(1.42)	—		(22.22)	335	(5.25)	354	33
4,000	136	2.2	353	6.6	377	0.81	0.86	0.27	11.61	195	(5.77)	256	(1.73)	326	45
2,488	297	1.0	405	6.0	385	0.58	(2.09)	0.40	3.79	283	35.97	82	(1.59)	324	37
4,290	122	2.9	315	6.8	375	1.93	4.81	(0.01)**	—		(25.02)	352	9.93	178	45
2,081	354	—		—		(32.59)	6.07	13.77	—		—		—		33
899	467	3.2	303	12.1	280	1.74	1.45	0.55	12.21	186	51.13	43	13.73	130	28
2,500	293	—		—		(0.23)	0.05	N.A.	—		—		—		22
3,642†	170	6.2	158	15.7	196	2.12	1.56	0.31	21.20	69	13.81	169	20.65	54	34
2,650	270	3.9	268	18.4	128	2.16	2.02	0.59	13.86	161	6.54	202	16.00	91	27
2,366	317	5.2	199	14.4	228	2.92	2.06	0.76	14.41	151	49.59	48	6.11	228	40
3,111	214	11.8	38	16.9	156	6.77	4.92	1.29	18.03	105	14.92	158	16.03	90	10
4,300	118	5.5	189	20.4	79	3.60	2.59	0.54	20.89	71	29.74	102	23.10	36	36
3,144	211	4.4	237	13.9	242	4.80	5.82	0.12	44.61	5	—		—		34
6,408	29	2.2	356	8.9	345	1.43	1.03	1.37	0.43	298	(19.46)	323	1.86	279	23
2,800	239	2.4	346	87.5	1	0.44**	(1.16)	(1.23)‡	—		42.02	64	(13.09)	374	37
2,335	319	9.7	66	15.2	211	3.33	3.17	0.70	16.88	115	12.02	175	18.84	62	33
2,100	344	7.2	129	24.1	41	2.27	1.47	0.61	14.04	158	(7.18)	263	4.30	251	37
1,775	402	1.3	385	7.6	362	0.68	1.74	0.20	13.02	175	(38.17)	408	—		26
1,225	451	3.9	265	31.2	14	2.09**	0.36	N.A.	—		227.33	1	—		22
2,900	231	—		—		(0.05)	(0.19)	0.15	—		58.19	35	(11.88)	373	37
2,069†	360	3.4	296	12.2	275	2.32	2.01	1.05	8.25	234	3.38	223	4.76	246	34
2,731	248	—		—		(0.56)	(0.69)	(0.22)	—		(28.60)	368	(6.79)	361	20
2,573	280	43.8	1	42.0	4	17.99	4.75	0.18**	58.48	1	2.42	225	15.36	107	45
4,300	121	4.7	229	16.3	172	2.95	2.08	1.42	7.59	242	36.29	79	5.99	230	31
225	496	—		—		(1.30)	0.65	(1.01)**	—		(49.40)	442	9.14	191	29

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
801	817	**Florida Rock Industries** (Jacksonville, Fla.)[3]	193,674	134,175	294	13,445	175	74,347	244
802	823	**KDI** (Cincinnati)	192,880	96,260	390	5,702	329	24,723	463
803	824	**Tultex** (Martinsville, Va.)[17]	191,975	112,148	341	10,066	221	51,917	347
804	●	**Varco International** (Orange, Calif.)	191,620	178,713	190	22,306	93	71,338	255
805	816	**Fischer & Porter** (Horsham, Pa.)	191,112	147,292	256	1,354	418	52,333	345
806	831	**Russ Togs** (New York)[10]	190,431	96,956	387	9,079	242	61,639	297
807	850	**Rexham** (New York)	189,854	125,560	315	9,445	234	72,018	252
808	●	**Friona Industries** (Friona, Tex.)[16]	189,842	47,377	494	2,262	399	21,513	476
809	846	**William Carter** (Needham Heights, Mass.)	189,695	106,636	360	6,842	299	55,018	328
810	812	**Norlin Industries** (White Plains, N.Y.)	189,659¶	108,710	351	5,471**	336	58,586	315
811	760	**Michigan General** (Dallas)	188,887¶	111,862	343	919**	426	14,449	484
812	845	**Lane** (Altavista, Va.)	187,896	118,752	326	14,061	160	105,662	152
813	721	**Richmond Tank Car** (Houston)	187,412	184,112	183	5,805	326	94,599	171
814	●	**Kearney-National** (New York)	186,483	123,033	317	6,793	300	24,248	466
815	765	**Triangle Pacific** (Dallas)	186,240	113,225	336	5,356	340	63,352	286
816	866	**Houghton Mifflin** (Boston)	185,693	151,618	248	10,412	216	83,749	205
817	●	**Texas International** (Oklahoma City)	185,535¶	526,298	10	7,247	290	102,399	158
818	887	**Daniel Industries** (Houston)[3]	185,340	152,250	244	14,890	151	85,750	199
819	893	**Adobe Oil & Gas** (Midland, Tex.)	184,482	368,889	24	24,407	75	146,143	70
820	857	**Block Drug** (Jersey City, N.J.)[7]	184,032	161,449	226	18,358	123	113,607	128
821	830	**Tasty Baking** (Philadelphia)	183,861	61,237	481	(471)	445	26,567	458
822	●	**A.H. Belo** (Dallas)	182,245	143,443	272	20,245	104	124,631	103
823	●	**Pengo Industries** (Fort Worth, Tex.)[3]	182,163	250,350	89	15,810	141	112,922	130
824	914	**Papercraft** (Pittsburgh)	182,115	144,353	268	13,913	164	85,867	198
825	883	**Williamhouse-Regency** (New York)[16]	181,908	112,703	337	9,684	227	59,755	302
826	773	**Sun Electric** (Crystal Lake, Ill.)[13]	181,116	187,691	177	(4,278)	465	86,446	196
827	891	**Sullair** (Michigan City, Ind.)	180,996	136,550	290	1,034	425	69,679	265
828	863	**Angelica** (St. Louis)[10]	180,902	110,958	346	8,961	243	64,464	281
829	779	**Modine Manufacturing** (Racine, Wis.)[7]	180,770	128,029	308	7,445	286	78,162	227
830	854	**GenRad** (Concord, Mass.)	180,755	156,294	236	(1,772)	452	73,460	248
831	●	**Petro-Lewis** (Denver)[16]	180,050	560,765	9	33,884	31	127,635	96
832	829	**Ranco** (Columbus, Ohio)[3]	179,466	128,899	305	1,942	406	54,033	335
833	882	**Telex** (Tulsa, Okla.)[7]	178,466	151,820	246	8,083	271	49,822	360
834	869	**Coleco Industries** (Hartford, Conn.)	178,031	99,395	380	7,711	279	47,467	374
835	821	**Hayes-Albion** (Jackson, Mich.)[4]	177,245	115,117	334	(4,013)	464	58,046	318
836	877	**George Banta** (Menasha, Wis.)	177,082	93,466	397	8,153	268	51,399	350
837	777	**American Biltrite** (Cambridge, Mass.)	176,879¶	79,484	447	(441)	443	40,589	403
838	803	**Bohemia** (Eugene, Ore.)[6]	176,805	240,516	98	6,685	303	106,368	149
839	853	**GF Business Equipment** (Youngstown, Ohio)	176,628	85,138	432	794	431	42,603	393
840	851	**Midland Glass** (Cliffwood, N.J.)[3]	176,599	105,993	364	(2,314)	455	37,791	413
841	927	**Camco** (Houston)	176,080	127,618	309	15,590	144	61,240	298
842	909	**Standard-Coosa-Thatcher** (Chattanooga, Tenn.)[3]	175,470	76,379	455	1,493	415	37,346	415
843	874	**Anta** (Oklahoma City)[16]	174,858	133,600	295	8,669	253	74,659	243
844	860	**Polychrome** (Yonkers, N.Y.)[24]	174,608	126,646	310	5,952**	325	45,765	383
845	834	**Clow** (Oak Brook, Ill.)	174,483	110,492	347	(4,872)	468	40,968	399
846	919	**Federal Signal** (Oak Brook, Ill.)	173,926	122,587	319	11,770	197	75,554	240
847	881	**Augat** (Mansfield, Mass.)	173,909	166,474	212	20,098	108	102,678	157
848	886	**Franklin Electric** (Bluffton, Ind.)	173,736	98,162	385	7,059	295	52,504	343
849	908	**Energy Reserves Group** (Wichita)	173,599	357,047	25	(22,606)	489	91,489	178
850	806	**Bulova Watch** (New York)[25]	173,347	155,697	239	(3,677)	462	39,623	407

●Indicates that a corporation was not among the 500 or the Second 500 in 1980.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

†Average for the year; see the reference to "employees" on page 200.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[24] Wholly owned by Dainippon Ink & Chemicals.

[25] Owned by Loews 94%.

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			EARNINGS PER SHARE GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
2,075	358	6.9	134	18.1	135	2.99	2.43	N.A.	—		7.83	195	—		32
3,300	200	3.0	314	23.1	49	0.61	0.53	(0.66)‡	—		100.00	13	—		36
5,836	45	5.2	200	19.4	106	2.23	1.70	N.A.	—		34.64	86	—		23
1,645	418	11.6	41	31.3	13	2.01	1.11	N.A.	—		(44.06)	431	—		45
3,937	143	0.7	420	2.6	420	0.44	0.39	0.14**	12.13	188	(20.48)	327	0.99	294	38
3,600†	174	4.8	225	14.7	220	2.53	2.13	1.28‡	7.05	250	10.49	180	3.53	263	23
2,725	253	5.0	215	13.1	256	2.19	1.55‡	(0.21)	—		23.52	121	—		26
500	488	1.2	398	10.5	317	1.02	1.01	N.A.	—		(35.22)	394	—		20
6,300	34	3.6	286	12.4	269	12.22	10.80	3.73	12.60	182	—		—		23
2,284	326	2.9	320	9.3	334	N.A.	N.A.	N.A.	—		—		—		47
2,900	233	0.5	423	6.4	380	0.15**	(3.47)	0.31	(7.00)	318	(34.65)	392	(6.97)	365	34
5,200	68	7.5	121	13.3	253	6.21	5.65	2.07	11.61	194	44.25	58	1.37	289	25
1,616	421	3.1	308	6.1	384	0.57	3.23	N.A.	—		(43.20)	429	—		37
2,300	322	3.6	282	28.0	16	1.81	1.26	0.02‡	56.92	2	60.00	31	14.80	114	36
2,600	277	2.9	321	8.5	349	1.33	0.74	0.93	3.64	286	0.74	231	6.36	226	26
1,712	410	5.6	185	12.4	270	3.55	3.33	1.22	11.27	200	(10.34)	279	5.05	241	27
1,060	463	3.9	264	7.1	373	0.37	0.41	0.39**	(0.53)	301	100.89	12	30.74	12	10
2,550	282	8.0	105	17.4	150	1.81	1.36	0.17	26.68	35	(15.19)	300	28.58	15	38
480	489	13.2	26	16.7	159	1.51	1.47	0.19	23.03	54	(24.82)	349	—		10
2,040	364	10.0	62	16.2	183	2.48	2.23	0.80	11.98	191	17.22	144	2.80	272	43
2,100	347	—		—		(0.17)	0.54	1.18	—		(14.03)	295	1.17	290	20
2,047	363	11.1	49	16.2	176	2.45	2.34	N.A.	—		—		—		27
3,700	164	8.7	88	14.0	237	2.10	0.62	N.A.	—		(37.96)	406	—		45
2,900†	230	7.6	115	16.2	180	3.01	2.52	1.13	10.29	214	49.01	50	5.13	237	26
3,772	161	5.3	196	16.2	179	2.48	2.20	0.61	15.06	142	16.96	145	6.16	227	26
3,381	192	—		—		(0.68)	2.02	0.38	—		(42.35)	423	6.57	224	38
1,700	414	0.6	421	1.5	429	0.11	1.21	0.14	(2.38)	309	(50.93)	444	—		45
5,700	56	5.0	217	13.9	241	1.45	1.14	0.63	8.69	230	91.34	18	7.62	212	23
2,700	259	4.1	252	9.5	332	2.57	3.64	1.11	8.76	229	10.00	183	13.92	127	40
2,699	264	—		—		(0.23)	1.39	N.A.	—		(41.83)	421	—		38
1,651	417	18.8	5	26.5	24	1.50	0.99	(0.13)	—		(35.40)	397	33.29	8	10
5,600	58	1.1	402	3.6	416	0.55	1.11	1.02	(5.99)	317	11.41	176	5.69	233	38
3,902	145	4.5	235	16.2	177	0.64	0.08	0.53	1.90	294	33.20	91	(5.95)	357	44
2,604†	273	4.3	244	16.2	175	1.01	2.33	0.55	6.27	261	(12.73)	289	(10.75)	372	47
2,900	232	—		—		(1.05)	(0.77)	0.78	—		(21.73)	331	(3.07)	333	40
1,952	377	4.6	232	15.9	190	3.10	3.06	0.88	13.42	168	(10.78)	280	8.80	195	27
1,800	395	—		—		(0.17)	(4.78)	0.74	—		19.57	133	3.46	266	30
2,000	370	3.8	272	6.3	381	1.81	5.70	0.36**	17.53	109	(33.09)	386	7.52	214	26
3,144	210	.04	424	1.9	427	0.30	0.80	0.15	7.18	248	5.72	206	(5.05)	352	25
2,079†	355	—		—		(0.74)	0.79	0.83	—		(27.89)	366	—		32
2,475	299	8.9	82	25.5	31	2.16	0.94	0.40	18.37	100	4.83	215	15.41	105	45
3,400	190	0.9	416	4.0	409	2.82	3.68	2.22	2.42	291	34.43	89	14.21	123	22
3,601	173	5.0	216	11.6	290	2.03	1.77	N.A.	—		14.94	157	—		34
1,955	376	3.4	298	13.0	259	N.A.	N.A.	N.A.	—		—		—		27
2,047	362	—		—		(1.69)	(1.73)	1.45	—		(18.07)	314	(8.09)	367	34
2,414	308	6.8	142	15.6	199	1.62	1.50	0.17‡	25.29	43	14.06	166	22.15	46	36
3,200	206	11.6	43	19.6	99	1.45	1.36	0.20	21.91	63	(5.88)	257	15.86	94	36
3,370†	193	4.1	257	13.4	251	1.90	0.60	0.55	13.20	171	36.80	76	9.15	190	36
590	483	—		—		(0.46)	0.29	N.A.	—		(44.44)	432	16.72	81	10
3,150	208	—		—		(0.91)	(2.22)	1.69	—		—		—		38

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
851	900	**Essex Chemical** (Clifton, N.J.)	172,772	107,343	358	8,152	270	34,467	428
852	921	**Sta-Rite Industries** (Milwaukee)	172,599	103,525	371	5,964	324	37,054	419
853	800	**Continental Copper & Steel Industries** (Cranford, N.J.)[16]	172,223	96,362	389	6,729	301	48,356	368
854	873	**Conwood** (Memphis)	171,870	105,976	365	18,273	125	84,524	203
855	628	**Illini Beef Packers** (Geneseo, Ill.)[7,26]	171,764¶	20,249	500	1,441	416	11,681	490
856	895	**Bundy** (Warren, Mich.)[4]	171,732	125,615	314	7,469	285	65,087	277
857	875	**Cronus Industries** (Dallas)	171,292	77,615	452	3,331	378	20,433	479
858	911	**West** (Phoenixville, Pa.)	170,805	120,631	323	13,815	166	75,902	237
859	947	**Newell Companies** (Freeport, Ill.)	170,389	99,016	382	9,604	229	51,064	353
860	855	**Harper & Row** (New York)[6]	170,232	137,189	288	5,794	327	62,523	291
861	922	**R.P. Scherer** (Troy, Mich.)[7]	169,997	146,550	258	8,538	258	78,349	226
862	905	**J.M. Smucker** (Orrville, Ohio)[6]	169,442	73,331	461	7,705	280	50,256	359
863	940	**Pall** (Glen Cove, N.Y.)[4]	169,081	182,439	186	24,799	73	91,312	179
864	●	**Farah Manufacturing** (El Paso, Tex.)[13]	168,842	104,094	369	10,964	209	29,686	448
865	811	**Applied Power** (Brookfield, Wis.)[14]	168,706	89,884	418	5,161	346	38,288	412
866	●	**Tacoma Boatbuilding** (Tacoma, Wash.)	168,639	109,648	349	6,592	307	25,197	462
867	916	**Aegis** (Coral Gables, Fla.)	168,367	80,778	440	4,549	359	34,895	426
868	819	**Keller Industries** (Miami)[4]	167,250	101,935	375	4,849	351	60,414	301
869	●	**CMI** (Oklahoma City)	167,239	174,068	201	4,550	358	59,191	306
870	943	**Wallace Business Forms** (Hillside, Ill.)[4,27]	166,158	100,167	379	12,810	184	68,971	267
871	833	**Inspiration Consolidated Copper** (Phoenix)	165,438	222,501	124	(24,162)	491	78,529	225
872	897	**Gulton Industries** (Princeton, N.J.)[12]	164,188	82,873	438	1,658	412	40,622	402
873	784	**Criton** (Bellevue, Wash.)[10]	163,707¶	88,381	423	18,936	120	54,242	333
874	932	**Beverage Management** (Columbus, Ohio)[7]	163,244	71,653	463	6,079	320	39,354	408
875	●	**Sabine** (Dallas)	163,143	347,201	30	28,342	55	183,077	33
876	930	**Helene Curtis Industries** (Chicago)[12]	163,097	84,016	436	4,535	360	35,581	422
877	912	**Automatic Switch** (Florham Park, N.J.)	161,531	135,057	292	20,231	105	116,490	121
878	888	**Core Industries** (Bloomfield Hills, Mich.)[14]	160,953	108,590	352	13,710	169	76,448	234
879	959	**Binks Manufacturing** (Franklin Park, Ill.)[17]	160,591	89,657	419	7,045	296	59,275	305
880	920	**Baldor Electric** (Fort Smith, Ark.)	160,162	102,276	373	11,733	199	63,470	285
881	865	**Teradyne** (Boston)	159,942	165,736	215	4,267	362	90,541	181
882	948	**Soundesign** (Jersey City, N.J.)	159,684	79,773	446	3,075	381	33,645	434
883	852	**Farmer Bros.** (Torrance, Calif.)[16]	159,611	72,839	462	13,034	181	59,123	308
884	907	**Nordson** (Amherst, Ohio)[13]	159,178	106,740	359	9,788	224	67,613	271
885	●	**Intermedics** (Freeport, Tex.)[13]	158,767	132,030	301	16,636	134	84,970	200
886	994	**Standard Motor Products** (Long Island City, N.Y.)	157,081	110,060	348	11,258	204	55,979	324
887	950	**Fedders** (Edison, N.J.)[13]	156,779	146,851	257	(5,392)	471	19,793	480
888	935	**Coca-Cola Bottling Co. of Miami** (Coral Gables, Fla.)	156,460	96,601	388	6,911	298	30,403	445
889	961	**Analog Devices** (Norwood, Mass.)[13]	156,236	144,901	267	4,589	356	71,070	259
890	970	**Woodward Governor** (Rockford, Ill.)[3]	155,687	108,200	354	12,442	189	77,325	229
891	879	**La-Z-Boy Chair** (Monroe, Mich.)[6]	155,617	119,140	325	9,632	228	83,482	207
892	●	**MCO Holdings** (Los Angeles)	155,492	351,875	28	19,112	114	52,707	341
893	963	**Moog** (East Aurora, N.Y.)[3]	155,140	174,289	200	10,245	218	74,167	245
894	901	**Pirelli Cable** (Union, N.J.)	154,662	102,825	372	(6,033)	472	52,691	342
895	928	**Texfi Industries** (Greensboro, N.C.)[13]	154,564	80,183	443	317	436	15,915	483
896	899	**Warner Electric Brake & Clutch** (South Beloit, Ill.)	154,289	99,131	381	9,339	236	63,062	289
897	956	**Elixir Industries** (Gardena, Calif.)[14]	154,175	70,749	465	2,255	400	40,900	400
898	624	**Continental Steel** (Kokomo, Ind.)[28]	153,912	126,285	311	(17,080)	486	13,156	487
899	●	**AFG Industries** (Kingsport, Tenn.)	153,660	178,610	191	8,630	255	32,273	436
900	926	**Dynamics Corp. of America** (Greenwich, Conn.)	152,580	98,963	383	5,693	330	55,769	325

●Indicates that a corporation was not among the 500 or the Second 500 in 1980

†Average for the year; see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[26] Name changed to Imark Industries October 31, 1981.

[27] Name changed to Wallace Computer Services November 4, 1981.

[28] Name changed from Penn-Dixie Industries March 15, 1982.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
950	465	4.7	228	23.7	46	2.81	1.90	(0.02)‡	—		34.47	88	22.99	37	28
2,078	356	3.5	294	16.1	184	1.83	(0.21)	0.79	8.76	228	26.94	111	8.33	201	45
2,000†	367	3.9	263	13.9	240	1.73	1.15	(0.04)	—		(21.44)	330	3.59	261	33
1,552	425	10.6	53	21.6	67	3.26	2.84	0.80	15.08	141	7.50	196	18.22	66	21
200	497	0.8	417	12.3	274	1.67	0.00	N.A.	—		(4.62)	248	—		20
2,952	225	4.3	241	11.5	295	1.93	0.06	1.34	3.72	285	4.45	217	0.97	296	34
1,798	399	1.9	363	16.3	173	1.41	0.40	N.A.	—		22.73	126	—		34
3,500	184	8.1	102	18.2	130	1.77	1.28	0.33	18.29	102	78.34	22	14.67	116	30
3,150	209	5.6	180	18.8	114	3.00	2.52	1.33	8.47	232	28.97	104	—		25
1,900	383	3.4	299	9.3	336	1.89	1.44	0.73	9.98	216	26.70	114	5.12	238	27
1,966	373	5.0	213	10.9	307	1.11	0.67	0.43	9.95	217	(11.74)	285	(3.62)	340	28
1,211	452	4.5	234	15.3	207	4.08	3.35	1.46	10.82	209	18.96	135	8.57	198	20
3,200	207	14.7	15	27.2	19	1.86	1.42	(0.00)‡	—		(18.95)	319	39.01	2	45
6,000	41	6.5	147	36.9	7	1.74	0.91	1.07	4.98	275	38.28	80	(9.05)	369	23
2,100	345	3.1	310	13.5	250	2.85	0.39	0.48	19.50	86	—		—		45
2,575	279	3.9	282	26.2	27	2.65	2.57	N.A.	—		(2.51)	244	—		37
2,100	350	2.7	329	13.0	258	0.42	0.18	(0.73)‡	—		32.98	93	3.63	259	30
3,658†	167	2.9	317	8.0	354	1.40	0.30	1.24	1.22	295	18.92	136	(4.52)	347	34
2,082	353	2.7	328	7.7	360	0.73	0.50	0.36	7.33	246	73.94	23	3.63	260	45
1,799	398	7.7	114	18.6	118	2.88	2.45	0.60	16.98	113	35.75	84	13.87	128	27
2,181	334	—		—		(7.38)	(5.38)	3.63	—		—		—		10
3,550	178	1.0	406	4.1	407	0.51	1.95	(2.04)‡	—		(42.69)	425	3.47	265	36
2,521	288	11.6	42	34.9	10	5.44	3.49	(2.50)	—		(31.46)	380	25.31	24	41
2,106	339	3.7	275	15.4	203	1.51	1.11	N.A.	—		16.22	152	—		49
408	490	17.4	7	15.5	202	1.94	1.74	0.56	13.23	170	(40.50)	418	22.67	38	10
1,900	384	2.8	325	12.7	265	2.34	1.22	0.76	11.90	192	12.89	174	5.34	236	43
2,443	307	12.5	31	17.4	149	2.44	2.26	0.51	16.95	114	6.32	203	10.72	164	34
2,400	310	8.5	92	17.9	139	1.38	1.39	0.31	16.11	125	4.41	219	19.26	61	34
1,500	430	4.4	239	11.9	285	2.30	2.53	0.83	10.73	210	(16.80)	310	13.53	132	45
2,550	283	7.3	126	18.5	122	1.84	1.50	0.17	26.89	33	32.72	95	—		36
3,050	218	2.7	334	4.7	398	1.00	2.75	(0.47)	—		(27.66)	364	9.03	193	38
600	482	1.9	364	9.1	338	1.37	0.40	0.72	6.64	257	137.84	5	7.90	209	36
1,085	460	8.2	99	22.0	58	6.77	4.29	1.08	20.15	80	(7.33)	266	17.17	77	20
2,498	296	6.1	159	14.5	227	1.85	2.60	N.A.	—		(45.77)	433	—		45
2,100	351	10.5	55	19.6	98	1.76	1.26	N.A.	—		25.02	117	—		38
2,400	314	7.2	130	20.1	85	2.48	0.74	0.65	14.33	153	99.23	14	8.15	205	40
2,480	298	—		—		(0.66)	(2.79)	1.70	—		(35.29)	396	(19.29)	381	45
1,443	434	4.4	238	22.7	51	4.35	3.15	6.04	(3.23)	312	34.07	90	9.11	192	49
2,735	247	2.9	316	6.5	378	0.50	1.12	0.13	14.42	150	(37.94)	405	26.00	22	36
2,529	287	8.0	107	16.1	185	16.48	12.82	3.03	18.45	98	—		—		38
3,449	186	6.2	157	11.5	294	2.10	2.14	1.16	6.11	262	29.84	101	—		25
371	491	12.3	35	36.3	9	1.57	0.81	0.99	4.72	278	1.74	227	(5.21)	353	10
2,924	227	6.6	144	13.8	243	1.29	1.09	0.24	18.31	101	(26.22)	358	22.54	41	41
1,260	447	—		—		N.A.	N.A.	N.A.	—		—		—		33
1,730	406	0.2	435	2.0	426	0.09	(6.24)	3.37	(30.39)	333	23.08	124	(18.65)	379	22
2,728	251	6.1	165	14.8	217	1.79	2.01	0.28	20.38	78	9.28	186	22.46	43	36
1,870	387	1.5	376	5.5	391	0.50	(0.55)	0.61	(1.97)	306	70.00	26	(6.79)	360	34
1,821†	392	—		—		(3.24)	(4.81)	0.53	—		(47.66)	439	(14.82)	375	33
1,743	403	5.6	183	26.7	22	1.48	0.58	0.76	6.89	252	166.67	3	3.44	267	32
2,187	333	3.7	274	10.2	320	1.26	2.28	(1.27)‡	—		(15.92)	304	(0.43)	312	36

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
901	957	**Valspar** (Minneapolis)[13]	152,540	66,345	472	7,654**	281	36,171	421
902	985	**Garan** (New York)[7]	152,397	90,421	416	9,476	232	52,085	346
903	889	**Dyneer** (Westport, Conn.)[4]	151,564	100,495	377	7,250	289	51,013	354
904	958	**Genesee Brewing** (Rochester, N.Y.)[6]	151,258*	75,081	459	8,310	263	49,681	361
905	872	**Crompton** (New York)[3]	151,081	116,868	330	(885)	446	58,820	313
906	●	**Vulcan** (Latrobe, Pa.)	150,640	91,416	408	4,810	352	41,467	397
907	991	**Great Lakes Chemical** (West Lafayette, Ind.)	150,333	170,198	207	18,031	126	108,878	141
908	923	**Hexcel** (San Francisco)	150,144	105,320	366	1,228	421	49,291	364
909	910	**Pantasote** (Greenwich, Conn.)	149,774	80,885	439	366**	435	32,029	439
910	944	**General Binding** (Northbrook, Ill.)	149,620	108,079	355	7,524	284	63,103	288
911	810	**Instrument Systems** (Jericho, N.Y.)[3]	149,305[e]	92,288	402	(11,407)	482	13,772	486
912	●	**Pratt & Lambert** (Buffalo, N.Y.)	148,953	67,243	470	4,705**	355	34,078	430
913	972	**Lee Enterprises** (Davenport, Iowa)[3]	148,844	172,514	205	19,074	115	101,327	161
914	982	**Keystone International** (Houston)	148,575	144,156	269	20,499	102	80,708	217
915	772	**Joslyn Mfg. & Supply** (Chicago)	148,432	152,300	243	15,867	140	99,626	165
916	●	**MacAndrews & Forbes Group** (New York)	148,367	75,287	458	5,671	332	21,609	475
917	890	**RSR** (Dallas)	148,294	65,008	475	2,936	386	27,568	455
918	●	**Steiger Tractor** (Fargo, N.D.)[3]	148,272	78,033	450	6,184	316	37,275	418
919	934	**Medalist Industries** (Mequon, Wis.)	148,077	86,189	430	(1,951)	454	30,796	443
920	952	**Scholastic** (New York)[14]	147,352	91,274	411	1,759	410	33,886	432
921	913	**Iroquois Brands** (Greenwich, Conn.)	147,070	91,371	409	(3,385)**	460	27,371	456
922	997	**Bob Evans Farms** (Columbus, Ohio)[6]	146,983	63,752	477	11,793	196	53,886	337
923	●	**De Tomaso Industries** (Red Bank, N.J.)	146,033	165,399	218	(10,619)	481	(4,425)	496
924	971	**Hazeltine** (Commack, N.Y.)	145,514	92,282	403	1,865	408	45,450	384
925	942	**Duriron** (Dayton, Ohio)	145,314	103,829	370	10,018	222	67,045	274
926	●	**Barry Wright** (Newton, Mass.)	144,903	92,268	404	12,769	185	69,044	266
927	933	**Medford** (Medford, Ore.)	144,678	85,143	431	2,930	387	54,651	330
928	●	**Ransburg** (Indianapolis)[17]	144,570	147,429	255	13,777	168	102,061	159
929	●	**Galaxy Carpet Mills** (Elk Grove Village, Ill.)[3]	144,442	65,844	474	5,786	328	26,392	459
930	●	**Great American Industries** (Binghamton, N.Y.)	144,275	80,654	441	6,184	317	35,314	424
931	917	**Conrac** (Stamford, Conn.)	144,238[e]	96,196	391	3,251	379	42,321	395
932	878	**Robintech** (Fort Worth, Tex.)[16]	143,388	90,951	413	(1,925)	453	27,884	453
933	●	**John H. Harland** (Decatur, Ga.)	143,242	76,161	457	13,929	163	63,296	287
934	●	**Winnebago Industries** (Forest City, Iowa)[14]	143,049	93,430	398	8,676**	252	70,875	260
935	●	**Molex** (Lisle, Ill.)[16]	143,014	116,224	332	15,990	139	80,059	219
936	973	**American Welding & Manufacturing** (Warren, Ohio)[17]	142,480	66,447	471	13,452	174	45,310	385
937	876	**Ideal Toy** (Hollis, N.Y.)[10]	141,397	94,161	394	(15,452)	485	25,346	461
938	969	**Facet Enterprises** (Tulsa)[3]	141,216	93,176	399	1,685**	411	46,381	380
939	990	**R.G. Barry** (Pickerington, Ohio)	141,080	68,133	469	1,284	419	30,622	444
940	924	**Everest & Jennings International** (Los Angeles)	141,052	106,299	362	4,245	363	68,692	269
941	981	**Roblin Industries** (Buffalo, N.Y.)	140,855[e]	80,034	444	(5,359)	469	12,126	489
942	●	**Chase Bag** (Greenwich, Conn.)	140,315	56,697	490	3,076	380	33,342	435
943	953	**Courier** (Lowell, Mass.)[3]	140,078	79,021	448	1,278	420	35,353	423
944	●	**Tom Brown** (Midland, Tex.)[7]	139,621	209,629	143	21,096	97	105,540	153
945	986	**John Fluke Manufacturing** (Everett, Wash.)[3]	139,580	128,783	306	8,478	259	64,874	279
946	●	**Forest Oil** (Denver)	139,004	493,008	13	5,104	348	89,715	186
947	983	**Monarch Machine Tool** (Sidney, Ohio)	138,770	91,303	410	19,013	117	70,163	262
948	945	**Simmonds Precision Products** (Tarrytown, N.Y.)	138,572	90,803	415	9,724	226	52,370	344
949	●	**International Controls** (Boca Raton, Fla.)	137,502	84,366	435	7,833	277	38,528	411
950	●	**Kuhlman** (Troy, Mich.)	137,339	63,343	478	3,651	371	32,112	438

● Indicates that a corporation was not among the 500 or the Second 500 in 1980

* Does not include excise taxes; see the explanation of "sales" on page 200

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

† Average for the year; see the reference to "employees" on page 200

‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

[e] Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			EARNINGS PER SHARE GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
1,286	446	5.0	214	21.2	70	2.85**	1.50	0.17	32.57	17	59.14	32	16.36	86	28
4,100	131	6.2	155	18.2	131	3.49	2.52	0.93	14.14	157	15.03	156	7.83	210	23
1,700	413	4.8	224	14.2	233	2.12	2.32	(0.19)‡	—		(34.24)	390	15.03	110	40
962	464	5.5	187	16.7	157	5.08	4.30	1.34	14.26	155	(24.53)	347	—		49
3,800	156	—		—		(0.69)	5.42	2.70	—		(32.13)	383	(0.45)	313	22
1,863	388	3.2	304	11.6	291	2.37	1.83	0.25	25.22	44	57.19	37	20.94	52	10
1,180	455	12.0	37	16.6	152	2.51	2.67	0.22	27.56	31	(9.44)	272	27.90	16	28
2,100	349	0.8	418	2.5	423	0.38	2.31	0.61	(4.62)	315	(47.01)	438	13.11	137	34
2,300	324	0.2	432	1.1	431	0.09**	0.38	(0.37)‡	—		14.25	164	4.22	252	30
2,725	254	5.0	212	11.9	282	1.50	1.65	0.50	11.61	196	(25.28)	355	(2.64)	328	44
2,000	368	—		—		(3.37)	(4.40)	2.10	—		(60.00)	452	(26.48)	383	34
1,500†	431	3.2	305	13.8	244	3.24**	2.38	1.51	7.93	237	4.22	221	9.35	187	28
4,000	139	12.8	28	18.8	113	2.70	2.79	0.52	17.91	106	30.07	100	17.21	174	27
1,547	426	13.8	18	25.4	32	1.74	1.50	0.15	27.77	30	(1.68)	242	34.61	7	34
2,000	369	10.7	51	15.9	188	4.48	3.55	0.93	17.03	112	104.83	8	19.94	58	36
647	479	3.8	270	26.2	26	3.77	0.85	(0.15)[29]	—		(0.98)	236	9.27	188	20
1,100	458	2.0	362	10.7	313	1.79	1.32	N.A.	—		(7.30)	264	—		33
794	473	4.2	249	16.6	161	1.85	1.91	N.A.	—		(37.29)	402	—		45
2,199	331	—		—		(1.09)	0.51	0.99	—		(29.07)	371	(3.31)	337	47
2,065†	361	1.2	396	5.2	394	1.02	1.60	1.22	(1.77)	305	(1.43)	239	(1.54)	323	27
1,240	450	—		—		(1.79)	1.34**	0.80‡	—		(24.84)	350	(4.84)	349	28
5,000	82	8.0	106	21.9	64	2.10	2.03	0.27	22.77	59	39.64	68	29.84	13	20
3,609	172	—		—		(5.16)	1.03	N.A.	—		—		—		40
2,741	246	1.3	390	4.1	406	0.91	2.37	(0.42)	—		(1.63)	241	13.18	136	36
2,356	318	6.9	137	14.9	215	1.45	1.43	0.31	16.68	118	(9.56)	273	22.55	39	45
2,160	336	8.8	84	18.5	121	1.55	1.32	0.12	29.16	24	(6.37)	259	27.71	17	34
1,444	433	2.0	361	5.4	392	1.18	3.78	0.54	8.13	235	(26.76)	360	—		26
1,723	409	9.5	69	13.5	249	1.80	1.89	0.41	15.94	127	(31.86)	382	15.36	106	45
1,425	435	4.0	259	21.9	61	2.43	0.83	0.62	14.64	146	42.11	63	—		22
2,657	266	4.3	248	17.5	148	3.87	4.08	(0.20)‡	—		4.87	214	9.96	177	30
1,785	400	2.3	351	7.7	361	1.34	2.05	0.93	3.72	284	56.44	38	8.07	207	36
1,420	436	—		—		(0.96)	(0.36)	0.30**	—		(39.61)	416	(5.81)	356	30
3,791	160	9.7	65	22.0	60	1.68	1.35	0.24	21.48	67	26.18	115	13.95	126	27
1,395	439	6.1	163	12.2	276	0.35**	(0.54)	0.19	6.30	259	36.36	78	(17.03)	376	40
2,379	316	11.2	48	20.0	90	2.44	2.28	N.A.	—		23.10	123	—		36
848	471	9.4	70	29.7	15	5.31	4.08	(0.04)	—		(28.87)	370	31.24	10	41
1,820†	393	—		—		(4.00)	0.97	0.89	—		86.70	19	(6.97)	364	47
2,455	304	1.2	397	3.6	414	0.60**	(2.31)‡	N.A.	—		(18.43)	317	—		40
3,700	165	0.9	413	4.2	405	0.33	0.62	0.37	(1.14)	303	(39.56)	415	(3.14)	334	31
2,700	260	3.0	312	6.2	383	0.55	1.38	0.27	7.37	244	(30.28)	375	14.48	120	38
1,588	423	—		—		(2.24)	(2.98)	0.38	—		(40.58)	420	(8.17)	368	33
2,411	309	2.2	355	9.2	337	11.07	7.45	N.A.	—		—		—		26
2,730	249	0.9	412	3.6	415	0.71	2.14	N.A.	—		(13.97)	294	—		27
1,200	454	15.1	13	20.0	88	0.57	0.14	N.A.	—		(46.07)	434	—		10
2,677	265	6.1	162	13.1	257	1.28	1.49	0.15	23.91	50	(18.34)	316	23.54	33	38
557	485	3.7	280	5.7	390	0.77	0.31	(0.40)	—		(30.15)	374	7.36	216	10
1,629	419	13.7	19	27.1	21	5.32	3.50	0.06	56.59	3	(16.02)	306	21.19	49	45
2,900	234	7.0	132	18.6	119	1.97	0.10	0.24	23.43	53	(14.37)	299	12.34	147	38
2,100	343	5.7	177	20.3	81	2.08	2.58	0.14‡	30.98	22	(22.85)	339	10.38	168	41
1,353	440	2.7	335	11.4	298	1.80	0.02	0.67**	10.39	213	45.82	54	12.56	144	36

[29] Figure is for Cohen-Hatfield.

THE SECOND 500 LARGEST INDUSTRIALS

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
'81	'80		($000)	($000)	RANK	($000)	RANK	($000)	RANK
951	●	**Intermark** (La Jolla, Calif.)[7]	136,955	102,129	374	5,316	341	26,201	460
952	960	**C.H. Masland & Sons** (Carlisle, Pa.)	136,529	59,370	486	253	439	29,909	446
953	995	**Vernitron** (Lake Success, N.Y.)	136,524	86,806	427	8,000	274	50,795	355
954	962	**Glenmore Distilleries** (Louisville, Ky.)[16]	136,336*	113,410	335	2,602	393	60,520	300
955	992	**Conrock** (Los Angeles)	135,828	91,480	406	6,116	319	72,770	249
956	965	**Publicker Industries** (Greenwich, Conn.)	135,816*	112,513	338	(23,978)	490	49,426	362
957	968	**Spectra-Physics** (San Jose, Calif.)[3]	135,740	140,717	279	2,518	394	64,416	282
958	●	**Paradyne** (Largo, Fla.)	135,413	175,519	198	17,508	129	117,745	118
959	976	**TMC Industries** (Rome, Ga.)[7]	135,335	76,346	456	(8,019)	478	(7,259)	498
960	●	**Webb** (St. Paul, Minn.)	134,825	84,447	434	5,530	334	37,606	414
961	●	**APL** (Great Neck, N.Y.)[16]	134,805	116,556	331	(6,347)	474	38,590	409
962	●	**General Steel Industries** (St. Louis)	134,773	91,467	407	8,277**	264	40,363	404
963	939	**AVX** (Great Neck, N.Y.)	134,214	149,702	252	(2,833)	458	63,945	284
964	●	**Dellwood Foods** (Yonkers, N.Y.)	134,091	32,808	499	2,195	401	18,444	481
965	●	**Bacardi** (San Juan, Puerto Rico)	133,857*	200,517	159	36,745	22	141,203	81
966	993	**Compo Industries** (Waltham, Mass.)[3]	133,736	63,224	479	3,534	373	23,477	468
967	987	**National Mine Service** (Pittsburgh)[16]	133,464	120,998	321	1,159	423	55,515	326
968	977	**Dayton Malleable** (Kettering, Ohio)[14]	133,363	73,490	460	1,792	409	48,324	369
969	966	**Tokheim** (Fort Wayne, Ind.)[17]	132,907	86,773	428	8,663	254	48,193	372
970	●	**Tomlinson Oil** (Wichita)[14]	132,796	51,750	492	(5,387)	470	10,792	493
971	●	**Sparton** (Jackson, Mich.)[16]	132,633	60,940	482	7,301	287	37,495	415
972	904	**International Rectifier** (Los Angeles)[16]	132,617	125,783	312	3,432	375	46,069	382
973	978	**Watkins-Johnson** (Palo Alto, Calif.)	132,426	116,127	333	6,682	305	71,160	257
974	980	**Cadence Industries** (West Caldwell, N.J.)	132,326	91,203	412	(3,061)**	459	28,726	451
975	●	**Mor-Flo Industries** (Cleveland)	132,147	83,938	437	1,879	407	16,622	482
976	●	**Kysor Industrial** (Cadillac, Mich.)	131,900	91,515	405	2,905	388	37,457	416
977	●	**Thomaston Mills** (Thomaston, Ga.)[16]	131,707	71,248	464	2,000	404	47,339	375
978	915	**Mirro** (Manitowoc, Wis.)	131,589	84,581	433	(1,158)	447	44,852	386
979	●	**Recognition Equipment** (Irving, Tex.)[13]	131,468	130,007	303	(8,167)	479	52,792	340
980	975	**Munsingwear** (Minneapolis)	131,168	77,306	453	(6,251)	473	40,246	405
981	954	**Swank** (Attleboro, Mass.)	131,068	79,857	445	4,728	354	59,275	304
982	●	**Coca-Cola Bottling Co. Consolidated** (Charlotte, N.C.)	129,902	60,409	484	7,568	283	41,210	398
983	●	**Graco** (Minneapolis)	129,715	89,460	420	7,284	288	58,991	309
984	941	**Combustion Equipment Associates** (New York)[7]	129,644*	64,631	476	(129,944)	493	(83,783)	499
985	●	**Intercraft Industries** (Chicago)	129,520	76,445	454	1,625	414	32,148	437
986	967	**Mount Vernon Mills** (Greenville, S.C.)	129,202	70,007	466	4,921	350	55,076	327
987	●	**Keuffel & Esser** (Morristown, N.J.)	129,045	86,380	429	5,125	347	46,105	381
988	●	**Safeguard Business Systems** (Fort Washington, Pa.)	128,010	59,125	487	8,753	249	23,952	467
989	●	**TRE** (Beverly Hills, Calif.)[4]	127,642	124,469	316	17,683	127	89,665	187
990	●	**Church & Dwight** (Piscataway, N.J.)	127,105	95,128	392	6,471	313	51,268	352
991	●	**Chatham Manufacturing** (Elkin, N.C.)	125,133	59,820	485	1,633	413	47,226	378
992	●	**General Automation** (Anaheim, Calif.)[4]	124,891	78,202	449	123**	442	23,390	470
993	●	**J.L. Clark Manufacturing** (Rockford, Ill.)[17]	124,466	107,448	357	13,151	177	59,344	303
994	938	**Walco National** (New York)[16]	124,394	128,606	307	14,220	205	61,790	295
995	●	**Goody Products** (Kearny, N.J.)	123,943	68,262	468	6,573	308	42,668	392
996	●	**Checker Motors** (Kalamazoo, Mich.)	123,146	60,555	483	(448)	444	31,891	440
997	●	**Trico Industries** (Gardena, Calif.)	123,047	94,128	395	11,185	206	50,258	358
998	●	**Sigma-Aldrich** (St. Louis)	123,009	104,466	368	16,284	137	82,053	212
999	●	**Instrumentation Laboratory** (Lexington, Mass.)[7]	122,534	97,140	386	5,271	342	33,849	433
1,000	●	**L.S. Starrett** (Athol, Mass.)[16]	122,451	94,866	393	13,791	167	72,167	251
		TOTALS	**120,938,347**	**90,718,567**		**5,737,617**		**43,904,770**	

●Indicates that a corporation was not among the 500 or the Second 500 in 1980.

*Does not include excise taxes; see the explanation of "sales" on page 200.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

†Average for the year; see the reference to "employees" on page 200.

		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
EMPLOYEES		SALES		STOCKHOLDERS' EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE		INDUSTRY CODE
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	
1,987	372	3.9	266	20.3	82	1.87	2.87	(1.46)‡	—		(52.80)	447	—		36
1,527	427	0.2	436	0.8	434	0.17	(2.15)	0.75	(13.79)	327	17.44	142	(6.55)	359	22
2,900	236	5.9	172	15.7	193	1.35	1.34	0.23**	19.36	87	(38.91)	411	11.33	159	36
863	469	1.9	365	4.3	402	1.42	3.56	(0.18)	—		(21.91)	332	12.03	151	49
1,094	459	4.5	236	8.4	350	1.53	2.34	0.90	5.45	268	6.90	200	13.22	135	10
800	472	—		—		(2.88)	0.09	0.04	—		(55.80)	449	(3.05)	331	28
2,104	340	1.9	366	3.9	412	0.55	2.21	0.24**	8.65	231	(60.47)	453	15.47	104	38
2,638	271	12.9	27	14.9	216	1.36	0.74	N.A.	—		30.82	99	—		44
1,959	375	—		—		(6.85)	(2.08)**	N.A.	—		—		—		22
1,500	432	4.1	254	14.7	222	2.44	2.24	0.72	12.98	177	5.04	212	14.67	117	27
1,729	407	—		—		(2.05)	0.61	0.79	—		(42.38)	424	(4.57)	348	26
1,526	428	6.1	160	20.5	77	2.13**	1.45**	(2.38)	—		155.98	4	14.01	125	28
4,630	97	—		—		(0.60)	1.76	N.A.	—		(53.44)	448	—		36
655	477	1.6	372	11.9	283	3.70	4.29**	0.47	22.92	56	(12.06)	286	6.06	229	20
765†	474	27.5	3	26.0	28	3.68	3.36	1.09	12.94	179	—		—		49
1,150	456	2.6	336	15.1	214	1.05	(0.26)	0.11‡	25.31	42	112.46	7	10.03	175	28
1,872	386	0.9	415	2.1	425	0.24	0.50	0.68	(9.89)	32[illegible]	(23.93)	345	8.96	194	45
2,100†	342	1.3	387	3.7	413	0.91	(2.78)	1.13	(2.14)	307	15.10	155	9.83	181	33
1,940	380	6.5	145	18.0	137	1.98	2.04	0.36	18.59	97	(40.04)	417	16.25	89	45
124	499	—		—		(1.36)	0.66	0.05	—		(67.87)	457	—		29
2,500	292	5.5	186	19.5	103	2.14	0.68	0.18	28.09	29	21.27	128	19.70	59	36
1,944	379	2.6	341	7.4	366	1.23	2.01‡	(0.98)	—		(32.31)	385	5.10	239	36
2,540	284	5.0	210	9.4	333	2.10	2.23	1.09	6.78	255	(26.31)	359	(0.39)	310	36
2,500	291	—		—		(2.22)**	1.66**	(0.24)‡	—		(10.14)	277	6.87	221	27
1,410	437	1.4	380	11.3	301	0.92	0.70	0.44	7.65	240	(25.20)	354	1.68	283	36
1,948	378	2.2	354	7.8	359	1.04	1.19	0.58	6.01	263	(1.14)	238	8.37	200	40
3,344	195	1.5	374	4.2	404	2.18	2.25	(0.24)	—		—		—		22
1,858	389	—		—		(0.49)	1.49	1.51	—		(8.06)	267	2.06	276	34
2,200	330	—		—		(1.34)	0.90	(0.09)‡	—		(56.89)	450	(6.43)	358	44
3,906	144	—		—		(3.41)	(2.90)	2.86	—		(22.38)	337	(1.50)	322	23
3,100	215	3.6	284	8.0	357	1.40	2.25	0.83	5.37	269	(6.80)	260	8.13	206	31
1,781	401	5.8	175	18.4	127	3.02	2.20	0.99	11.80	193	59.13	33	—		49
1,738	404	5.6	184	12.3	273	2.08	1.54	0.71	11.35	198	42.40	62	5.98	231	45
1,900	385	—		—		(12.52)	(2.55)	0.14	—		(70.88)	458	(21.22)	382	34
2,500	294	1.3	392	5.1	395	1.21	3.01	1.35	(1.09)	302	—		—		26
2,600	275	3.8	271	8.9	341	5.98	6.47	0.37	32.08	19	33.00	92	17.72	69	22
1,960	374	4.0	260	11.1	305	2.98	2.30	0.46	20.54	76	73.35	24	15.73	97	38
1,800	397	6.8	139	36.5	8	1.17	1.02	N.A.	—		(23.69)	344	—		27
2,400	311	13.9	17	19.7	95	2.82	3.06	0.60	16.74	117	(50.16)	443	0.41	303	41
559	484	5.1	207	12.6	266	1.53	1.79	N.A.	—		16.71	148	—		28
2,450	305	1.3	388	3.5	417	0.89	1.37	1.86**	(7.11)	319	8.51	193	6.80	222	22
1,850	390	0.1	440	0.5	437	0.05**	(5.90)	0.02	37.97	7	(34.55)	391	(6.86)	362	44
2,461	301	10.6	54	22.2	57	3.28	3.10	0.58	18.92	91	(13.68)	293	17.07	78	34
3,535	180	9.0	78	18.2	132	3.58	3.53	0.37**	25.48	41	16.30	150	23.92	31	36
3,880	152	5.3	197	15.4	204	3.20	3.14	N.A.	—		2.19	226	—		30
2,700	262	—		—		(0.74)	1.98	1.27**	—		—		—		40
1,575	424	9.1	75	22.3	55	1.46	0.96	0.03	47.46	4	(22.72)	338	37.58	5	45
1,820	394	13.2	25	19.8	93	1.89	1.51	N.A.	—		23.04	125	—		28
2,500	295	4.3	247	15.6	200	1.78	1.39	N.A.	—		(13.08)	315	—		38
2,533	286	11.3	47	19.1	111	3.52	3.13	0.67	18.04	104	10.49	179	17.92	68	45
1,591,529															

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‡Reflects an extraordinary charge of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

*Includes sales from discontinued operations of at least 10%, see explanation of "sales" on page 200.

NOTES TO THE FORTUNE DIRECTORY

SALES include service and rental revenues but exclude dividends, interest, and other non-operating revenues. All companies on the list must have derived more than 50% of their sales from manufacturing and/or mining. Sales of subsidiaries are included when they are consolidated; sales from discontinued operations are included when these figures are published. When the sales are at least 10% higher for this reason, there is a symbol(¶) next to the sales figure. All figures are for the year ending December 31, 1981, unless otherwise noted. Sales figures do not include excise taxes collected by the manufacturer, and so the figures for some corporations—most of which sell gasoline, liquor, or tobacco—may be lower than those published by the corporations themselves. When they are at least 5% lower for this reason, there is an asterisk (*) next to the sales figures.

ASSETS are those shown at the company's year-end.

NET INCOME is shown after taxes and after extraordinary credits or charges when any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss.

STOCKHOLDERS' EQUITY is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded when its redemption is either mandatory or outside the control of the company, except in the case of cooperatives.

EMPLOYEES: The figure shown is a year-end total except when it is followed by a dagger (†), in which case it is an average for the year.

EARNINGS PER SHARE: For all companies, the figures shown are the "primary" earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common-stock equivalents outstanding during the year. "Common-stock equivalents" generally include (a) convertible securities whose cash yield is less than two-thirds of the prime rate at the time the securities were issued and (b) options and warrants when the effect of their inclusion in the computation would reduce the "primary" earnings per share. Per-share earnings for 1980 and 1981 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1971. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Results are listed as not available (N.A.) where the companies are cooperatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published in 1971. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1971 or 1981.

TOTAL RETURN TO INVESTORS includes both price appreciation and dividend yield, i.e., to an investor in the company's stock. The figures shown assume sales at the end of 1981 of stock owned at the end of 1971 or 1980. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spin-offs were reinvested at the end of the year in which they were received. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) where shares are not publicly traded or traded on only a limited basis. Where companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total-return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded. Where corporations were substantially reorganized—e.g., because of mergers—the predecessor companies used in calculating total return are the same as those cited in the footnotes to the earnings-per-share figures.

INDUSTRY CODE numbers used in the directory indicate which industry represents the greatest volume of industrial sales for each company. The numbers refer to the industry groups below, which are based on categories established by the U.S. Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office. They are the same industry groups as those shown in the tables beginning on this page. The median figures in the tables refer only to results of companies among the 500; no attempt has been made to calculate medians in groups with fewer than four companies.

CODE NO.	INDUSTRY
10	Mining, crude-oil production
20	Food
21	Tobacco
22	Textiles, vinyl flooring
23	Apparel
25	Furniture
26	Paper, fiber, and wood products
27	Publishing, printing
28	Chemicals
29	Petroleum refining
30	Rubber, plastic products
31	Leather
32	Glass, concrete, abrasives, gypsum
33	Metal manufacturing
34	Metal products
36	Electronics, appliances
37	Shipbuilding, railroad and transportation equipment
38	Measuring, scientific, photographic equipment
40	Motor vehicles
41	Aerospace
42	Pharmaceuticals
43	Soaps, cosmetics
44	Office equipment (includes computers)
45	Industrial and farm equipment
46	Jewelry, silverware
47	Musical instruments, toys, sporting goods
49	Beverages

WHO DID BEST (AND WORST) AMONG THE SECOND 500

TOTAL RETURN TO INVESTORS, 1981

THE TEN HIGHEST

	SALES RANK	
Unifi	794	227.33%
International Banknote	743	170.00
AFG Industries	899	166.67
General Steel Industries	962	155.98
Soundesign	882	137.84
Cubic	742	119.11
Compo Industries	966	112.46
Joslyn Mfg. & Supply	915	104.83
Puritan Fashions	701	104.56
Philips Industries	740	104.11

THE FIVE LOWEST

Combustion Equipment	984	−70.88%
Tomlinson Oil	970	−67.87
Beker Industries	727	−65.08%
Compugraphic	659	−62.92
Refinemet International	618	−60.76

THE INDUSTRY MEDIANS

Apparel	36.28%
Furniture	29.01
Tobacco	27.82
Textiles, vinyl flooring	20.26
Rubber, plastic products	16.91
Beverages	16.58
Shipbuilding, railroad and transportation equipment	14.79
Electronics, appliances	14.05
Jewelry, sivlerware	10.98
Motor vehicles	7.18
Metal manufacturing	6.90
Publishing, printing	6.12
Chemicals	4.22
Paper, fiber, and wood products	.74
Food	−1.13
Metal products	−1.58
Leather	−1.87
Glass, concrete, abrasives, gypsum	−3.84
Soaps, cosmetics	−6.78
Measuring, scientific, photographic equipment	−15.54
Industrial and farm equipment	−15.95
Musical instruments, toys, sporting goods	−16.39
Office equipment (includes computers)	−22.16
Mining, crude-oil production	−23.47
Aerospace	−28.87
Petroleum refining	−37.52
Pharmaceuticals	N.A.
All industries	**1.40**

TOTAL RETURN TO INVESTORS, 1971-81

THE TEN HIGHEST

	SALES RANK	
First Mississippi	578	46.27%
Pall	863	39.01
Scientific-Atlanta	660	38.59
Southland Royalty	542	38.34
Trico Industries	997	37.58
Loral	767	35.04
Keystone International	914	34.61
Petro-Lewis	831	33.29
Crystal Oil	620	32.48
American Welding & Mfg.	936	31.24

THE FIVE LOWEST

Instrument Systems	911	−26.48%
Combustion Equipment	984	−21.22
Fedders	887	−19.29
Marcade Group	654	−18.71
Texfi Industries	895	−18.65

THE INDUSTRY MEDIANS

Aerospace	22.54%
Mining, crude-oil production	17.45
Petroleum refining	16.58
Jewelry, silverware	15.24
Electronics, appliances	12.97
Publishing, printing	10.85
Industrial and farm equipment	10.38
Chemicals	10.03
Metal manufacturing	9.83
Metal products	9.67
Glass, concrete, abrasives, gypsum	9.63
Measuring, scientific, photographic equipment	9.51
Food	9.23
Beverages	9.11
Motor vehicles	8.15
Furniture	8.11
Leather	7.06
Paper, fiber, and wood products	6.94
Textiles, vinyl flooring	6.80
Rubber, plastic products	4.22
Apparel	2.58
Soaps, cosmetics	1.67
Musical instruments, toys, sporting goods	−2.07
Office equipment (includes computers)	−3.86
Shipbuilding, railroad and transportation equipment	−5.58
Pharmaceuticals	N.A.
Tobacco	N.A.
All industries	**9.11**

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Commodore	790	87.5%
Commerce Clearing House	623	47.5
Phoenix Steel	776	46.4
Curtiss-Wright	798	42.0
Mary Kay Cosmetics	723	39.0
Puritan Fashions	700	37.9
Farah Manufacturing	864	36.9
Safeguard Business Systems	988	36.5
MCO Holdings	892	36.3
Criton	873	34.9

THE INDUSTRY MEDIANS

	1981	1980
Tobacco	20.6%	N.A.%
Aerospace	20.3	N.A.
Jewelry, silverware	20.2	18.7
Beverages	18.4	15.2
Furniture	16.6	13.9
Soaps, cosmetics	16.5	16.7
Rubber, plastic products	15.9	7.6
Electronics, appliances	15.9	14.7
Publishing, printing	15.8	16.5
Chemicals	15.1	15.0
Industrial and farm equipment	14.0	14.5
Metal products	13.9	12.2
Mining, crude-oil production	13.6	15.0
Food	12.3	15.2
Office equipment (includes computers)	12.2	16.4
Apparel	12.1	7.8
Glass, concrete, abrasives, gypsum	11.7	13.5
Musical instruments, toys, sporting goods	10.8	16.8
Leather	9.9	N.A.
Motor vehicles	9.7	8.4
Paper, fiber, and wood products	9.2	16.0
Measuring, scientific, photographic equipment	7.6	12.4
Metal manufacturing	7.4	9.0
Shipbuilding, railroad and transportation equipment	6.1	5.3
Textiles, vinyl flooring	4.3	10.5
Petroleum refining	3.2	18.1
Pharmaceuticals	N.A.	13.9
All industries	**13.6**	**14.1**

RETURN ON SALES

THE TEN HIGHEST

	SALES RANK	
Curtiss-Wright	798	43.8%
Mesa Petroleum	562	31.4
Bacardi	965	27.5
Pogo Producing	639	22.9
Petro-Lewis	831	18.8
Tampax	734	18.1
Sabine	875	17.4
Lufkin Industries	566	17.2
Pacific Lumber	631	16.7
General American Oil	619	16.5

THE INDUSTRY MEDIANS

	1981	1980
Mining, crude-oil production	11.8%	13.6%
Aerospace	9.4	N.A.
Soaps, cosmetics	7.1	6.4
Jewelry, silverware	6.6	5.4
Tobacco	6.4	N.A.
Office equipment (includes computers)	6.4	6.5
Furniture	5.6	5.6
Beverages	5.5	3.8
Electronics, appliances	5.4	5.9
Glass, concrete, abrasives, gypsum	5.2	5.9
Industrial and farm equipment	5.2	5.1
Chemicals	4.9	3.9
Publishing, printing	4.7	5.4
Metal products	4.3	4.5
Rubber, plastic products	4.2	2.0
Leather	3.7	N.A.
Measuring, scientific, photographic equipment	3.6	5.4
Apparel	3.1	1.9
Paper, fiber, and wood products	2.9	5.7
Motor vehicles	2.8	2.8
Musical instruments, toys, sporting goods	2.8	3.8
Shipbuilding, railroad and transportation equipment	2.4	1.8
Food	1.6	2.6
Textiles, vinyl flooring	1.4	2.5
Metal manufacturing	1.3	1.4
Petroleum refining	.4	3.2
Pharmaceuticals	N.A.	5.9
All industries	**4.3**	**4.5**

CHANGES IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Kearney-National	814	206.3%
Apple Computer	598	185.8
Pengo Industries	823	133.4
Tomlinson Oil	970	118.9
Acton	577	102.8
Tandem Computers	774	91.2
Tom Brown	944	87.9
Nortek	675	86.3
Marcade Group	654	86.3
Paradyne	958	78.4

THE TEN BIGGEST DECREASES

Curtiss-Wright	798	50.4%
Illini Beef Packers	855	43.9
Continental Steel	898	38.0
Toro	698	37.7
De Tomaso Industries	923	31.0
Lamson & Sessions	762	28.6
Joslyn Mfg. & Supply	915	27.2
Homestake Mining	721	22.0
Richmond Tank Car	813	21.1
Beker Industries	727	20.5

THE INDUSTRY MEDIANS

	INCREASES
Office equipment (includes computers)	22.8%
Jewelry, silverware	17.5
Mining, crude-oil production	17.3
Chemicals	14.2
Soaps, cosmetics	11.8
Food	11.7
Electronics, appliances	11.5
Petroleum refining	11.2
Leather	11.2
Industrial and farm equipment	11.0
Publishing, printing	10.9
Beverages	10.7
Apparel	10.6
Furniture	9.8
Paper, fiber, and wood products	9.6
Metal products	9.3
Tobacco	7.4
Textiles, vinyl flooring	7.4
Rubber, plastic products	6.9
Metal manufacturing	6.7
Aerospace	6.6
Musical instruments, toys, sporting goods	6.4
Motor vehicles	4.6
Glass, concrete, abrasives, gypsum	4.4
Measuring, scientific, photographic equipment	4.1
	DECREASES
Shipbuilding, railroad and transportation equipment	9.4%
Pharmaceuticals	N.A.

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*

	SALES RANK	
Kuhlman	950	9,767.6%
Sta-Rite Industries	352	3,429.0
Bundy	856	3,161.6
Management Assistance	601	2,326.5
Simmonds Precision Prod.	948	1,930.1
Wean United	706	1,259.5
Longview Fibre	551	750.5
Telex	833	715.6
Hesston	656	645.0
International Banknote	742	481.1

THE TEN BIGGEST DECREASES*

Eastmet	630	98.3%
Acton	577	97.3
Dentsply International	695	95.0
Pettibone	596	94.0
North American Coal	507	94.0
Graniteville	593	92.2
Sullair	827	89.3
Crystal Oil	620	87.3
Faberge	685	86.7
Hexcel	908	81.9

*Listings exclude money losers.

THE INDUSTRY MEDIANS

	INCREASES
Office equipment (includes computers)	75.8%
Rubber, plastic products	35.8
Tobacco	31.2
Apparel	31.1
Aerospace	30.0
Metal manufacturing	29.9
Chemicals	23.3
Electronics, appliances	18.1
Beverages	18.1
Industrial and farm equipment	16.7
Metal products	16.3
Food	15.6
Mining, crude-oil production	13.8
Furniture	13.5
Paper, fiber, and wood products	11.9
Jewelry, silverware	11.7
Soaps, cosmetics	11.0
Publishing, printing	10.0
Measuring, scientific, photographic equipment	8.3
Motor vehicles	3.6
	DECREASES
Petroleum refining	80.9%
Musical instruments, toys, sporting goods	31.7
Leather	27.4
Glass, concrete, abrasives, gypsum	13.1
Textiles, vinyl flooring	7.7
Shipbuilding, railroad and transportation equipment	.3
Pharmaceuticals	N.A.

SALES PER DOLLAR OF STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Phoenix Steel	776	$47.81
Dairylea Cooperative	522	36.71
Commodore	790	36.33
Macmillan Ring-Free Oil	757	18.87
Keystone Foods Corp.	526	18.32
Smithfield Foods	759	17.76
Illini Beef Packers	855	14.70
Refinemet International	618	14.38
Cagle's	797	13.72
Dominion Textile (USA)	643	13.37

THE FIVE LOWEST

Sabine	875	$.89
Homestake Mining	721	.80
General American Oil	619	.75
Hanna Mining	647	.66
Mesa Petroleum	562	.62

THE INDUSTRY MEDIANS

Food	6.96
Petroleum refining	6.86
Tobacco	5.16
Apparel	4.28
Rubber, plastic products	4.09
Metal manufacturing	4.03
Shipbuilding, railroad and transportation equipment	4.00
Musical instruments, toys, sporting goods	3.99
Jewelry, silverware	3.40
Textiles, vinyl flooring	3.39
Leather	3.39
Furniture	3.25
Beverages	3.15
Aerospace	3.02
Publishing, printing	3.01
Motor vehicles	3.01
Chemicals	2.92
Metal products	2.77
Industrial and farm equipment	2.71
Electronics, appliances	2.69
Paper, fiber, and wood products	2.65
Glass, concrete, abrasives, gypsum	2.61
Measuring, scientific, photographic equipment	2.55
Soaps, cosmetics	2.42
Office equipment (includes computers)	1.90
Mining, crude-oil production	1.43
Pharmaceuticals	N.A.
All industries	**2.97**

SALES PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
Pogo Producing	639	$1,479,975
Holly	528	1,175,037
Tomlinson Oil	970	1,070,935
LeaRonal	728	873,899
Pauley Petroleum	800	861,942
Illini Beef Packers	855	858,820
Macmillan Ring-Free Oil	757	815,392
Southland Royalty	542	754,979
Wisconsin Dairies Cooperative	536	644,518
Howell	722	648,220

THE FIVE LOWEST

CTS	772	$30,702
William Carter	809	30,110
Bob Evans Farms	922	29,397
AVX	963	28,988
Farah Manufacturing	864	28,140

THE INDUSTRY MEDIANS

Petroleum refining	$731,806
Food	160,007
Mining, crude-oil production	124,157
Chemicals	117,449
Beverages	112,296
Tobacco	96,477
Metal manufacturing	95,367
Glass, concrete, abrasives, gypsum	89,063
Paper, fiber, and wood products	88,403
Soaps, cosmetics	88,027
Rubber, plastic products	82,751
Shipbuilding, railroad and transportation equipment	82,600
Musical instruments, toys, sporting goods	76,231
Industrial and farm equipment	75,784
Publishing, printing	71,237
Metal products	68,234
Motor vehicles	67,032
Jewelry, silverware	66,858
Aerospace	64,937
Electronics, appliances	59,256
Textiles, vinyl flooring	59,134
Office equipment (includes computers)	59,013
Measuring, scientific, photographic equipment	55,532
Furniture	54,092
Leather	42,280
Apparel	38,399
Pharmaceuticals	N.A.
All industries	**75,931**

ASSETS PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
Pogo Producing	639	$3,859,650
Mesa Petroleum	562	2,327,733
Southland Royalty	542	1,297,774
General American Oil	619	965,151
MCO Holdings	892	948,450
Inexco Oil	714	910,803
Forest Oil	946	885,113
Sabine	875	850,983
Adobe Oil & Gas	819	768,519
Energy Reserves Group	849	605,164

THE FIVE LOWEST

Goody Products	995	$17,593
Farah Manufacturing	864	17,349
William Carter	809	16,926
Oxford Industries	599	13,929
Bob Evans Farms	922	12,750

THE INDUSTRY MEDIANS

Petroleum refining	$431,908
Mining, crude-oil production	339,652
Chemicals	74,919
Glass, concrete, abrasives, gypsum	73,853
Food	72,059
Soaps, cosmetics	67,903
Beverages	63,705
Paper, fiber, and wood products	62,588
Tobacco	60,420
Metal manufacturing	59,827
Office equipment (includes computers)	59,094
Industrial and farm equipment	53,634
Aerosapce	51,862
Metal products	47,558
Motor vehicles	47,199
Publishing, printing	46,911
Musical instruments, toys, sporting goods	45,211
Jewelry, silverware	43,659
Rubber, plastic products	42,854
Measuring, scientific, photographic equipment	42,784
Shipbuilding, railroad and transportation equipment	42,582
Electronics, appliances	41,982
Furniture	31,434
Textiles, vinyl flooring	30,755
Leather	25,760
Apparel	22,250
Pharmaceuticals	N.A.
All industries	**50,983**

THE MONEY LOSERS

	SALES RANK	LOSS
Combustion Equipment Associates	984	$129,944,000*
Bird & Son	661	27,060,000*
Inspiration Consolidated Copper	871	24,162,000*
Publicker Industries	956	23,978,000
Energy Reserves Group	849	22,606,000
Questor	517	20,365,000*
General Refractories	533	18,951,000
Continental Steel	898	17,080,000*
Ideal Toy	937	15,452,000
Toro	698	13,068,000
Jonathan Logan	527	11,989,000
Instrument Systems	911	11,407,000*
De Tomaso Industries	923	10,619,000
Lamson & Sessions	762	8,995,000*
Recognition Equipment	979	8,167,000
TMC Industries	959	8,019,000*
Bibb	702	7,917,000
Compugraphic	659	6,662,000
Salant	691	6,508,000
APL	961	6,347,000
Munsingwear	980	6,251,000*
Pirelli Cable	894	6,033,000
Fedders	887	5,392,000*
Tomlinson Oil	970	5,387,000
Roblin Industries	941	5,359,000*
Clow	845	4,872,000*
Beker Industries	727	4,856,000
Talley Industries	556	4,304,000*
Sun Electric	826	4,278,000
Hayes-Albion	835	4,013,000*
Pauley Petroleum	800	3,737,000
Bulova Watch	850	3,677,000*
Halstead Industries	780	3,534,000
Iroquois Brands	921	3,385,000
Cadence Industries	974	3,061,000
AVX	963	2,833,000
Keystone Consolidated Industries	540	2,550,000*
Bobbie Brooks	754	2,338,000*
Midland Glass	840	2,134,000
Medalist Industries	919	1,951,000
Robintech	932	1,925,000*
GenRad	830	1,772,000
Salem Carpet Mills	782	1,616,000
Champion Home Builders	795	1,599,000*
Olympia Brewing	597	1,394,000
Cagle's	797	1,291,000*
Mirro	978	1,158,000
Crompton	905	885,000
Tasty Baking	821	471,000
Checker Motors	996	448,000
American Biltrite	837	441,000*

*Also lost money in 1980.

Reprints of this year's FORTUNE Directory will be available in September. The directory will include the FORTUNE 500 (from the May 3 issue), the Second 500 (from this issue), and the non-industrial "50 Largest" lists (to be published July 12). Single copies of the reprints are $7 each; 25 to 99 copies, $6 each; 100 or more, $5 each. Please address inquiries and payment to Fortune, Double 500 Directory 1982, P.O. Box 8001, Trenton, N.J. 08650. Payment must accompany order.

ARRIVALS AND DEPARTURES

NEWCOMERS TO THE SECOND 500

	1981 SALES RANK
AFG Industries	899
Apple Computer	598
Bacardi	965
Barry Wright	926
Belo (A.H.)	822
Brown (Tom)	944
Clark (J.L.) Manufacturing	993
Coca-Cola Bottling Co. Consolidated	982
De Tomaso Industries	923
Dominion Textile (USA)	643
Forest Oil	946
Friona Industries	808
Galaxy Carpet Mills	929
General Automation	992
Goody Products	995
Graco	983
Great American Industries	930
Harland (John H.)	933
Instrumentation Laboratory	999
Intercraft Industries	985
Intermark	951
Intermedics	885
Lufkin Industries	566
MCO Holdings	892
Marcade Group	654
Molex	935
Mor-Flo Industries	975
Newpark Resources	648
Paradyne	958
Pengo Industries	823
Petro-Lewis	831
Pratt & Lambert	912
Questor	517
Ransburg	928
Recognition Equipment	979
Sabine	875
Safeguard Business Systems	988
Siemans-Allis	543
Sigma-Aldrich	998
Sparton	971
Standard Commercial Tobacco	521
Starrett (L.S.)	1,000
TRE	989
Tacoma Boatbuilding	866
Tandem Computers	774
Thomaston Mills	977
Tomlinson Oil	970
Trico Industries	997
Varco International	804
Webb	960

RETURNED TO THE SECOND 500*

	1981 SALES RANK
APL (1976: 898)	961
CMI (1979: 996)	869
Chase Bag (1974: 984)	942
Chatham Manufacturing (1973: 984)	991
Checker Motors (1979: 874)	996
Church & Dwight (1976: 993)	990
Dellwood Foods (1977: 995)	964
Farah Manufacturing (1976: 814)	864
Fleetwood Enterprises (1971: 551)	520
General Felt Industries (1977: 794)	644
General Refractories (1977: 509)	533
General Steel Industries (1972: 639)	962
International Controls (1972: 944)	949
International Flavors & Fragrances (1979: 501)	501
Kearney-National (1969: 959)	814
Keuffel & Esser (1970: 987)	987
Kuhlman (1979: 934)	950
Kysor Industrial (1979: 907)	976
MacAndrews & Forbes Group (1979: 983)	916
McDonough (1978: 523)	523
Reynolds & Reynolds (1977: 959)	768
Steiger Tractor (1976: 979)	918
Texas International (1979: 767)	817
Vulcan (1979: 891)	906
Winnebago Industries (1979: 730)	934

*Figures in parentheses indicate year and sales rank the last time the company was listed.

DEPARTURES FROM THE SECOND 500

	1980 SALES RANK
ARTRA Group	903
Allegheny Beverage[1]	946
American Greetings[2]	520
American Microsystems[3]	984
Ampco-Pittsburgh[2]	512
Arctic Enterprises	815
Armstrong Rubber[2]	535
Arvin Industries[2]	513
Barnes Group[2]	509
Brown-Forman Distillers[2]	518
Ceco[2]	508
Centronics Data Computer	988
Chickasha Cotton Oil	999
Copeland[4]	561
Cox Broadcasting[1]	601
DHJ Industries[5]	820
Deluxe Check Printers[2]	514
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FSC[7]	885
Fansteel[8]	705
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Fort Howard Paper[2]	538
Franklin Mint[9]	566
Gates Learjet[2]	576
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Geosource[2]	503
Hasbro Industries	974
Houston Oil & Minerals[10]	541
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Lehigh Valley Industries	998
Ludlow[13]	702
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Multimedia[1]	868
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Ronson	936
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[1] No longer classified as an industrial.
[2] Moved up to the First 500.
[3] Acquired by Gould (500 rank: 179) Feb. 1982.
[4] Became a private company.
[5] Consolidated in Dominion Textile (USA) (rank: 821).
[6] Acquired by Hillman March 1982.
[7] Full results are no longer made public.
[8] Wholly owned by H.K. Porter (500 rank: 418).
[9] Acquired by Warner Communications (500 rank: 135) March 1981.
[10] Acquired by Tenneco (500 rank: 16) April 1981.
[11] Acquired by General Electric (500 rank: 11) Feb. 1981.
[12] Acquired by Cooper Industries (500 rank: 142) April 1981.
[13] Acquired by Tyco Laboratories (rank: 572) Sept. 1981.
[14] Liquidated May 1981.
[15] Acquired by Tyler (500 rank: 370) July 1981.
[16] Acquired by Witco Chemical (500 rank: 267) Feb. 1982.
[17] Acquired by Stroh Brewery May 1981.
[18] Acquired by Cooper Laboratories (rank: 719) Dec. 1981.
[19] Acquired by Fairchild Industries (500 rank: 262) Nov. 1980.
[20] Acquired by Bucyrus-Erie (500 rank: 475) Dec. 1981.

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Aegis	867
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Alaska Interstate	573
Albany International	557
Alberto-Culver	641
Allen Group	569
Allied Products	671
Alton Packaging	571
Amalgamated Sugar	591
Amdahl	508
Amerace	613
American Biltrite	837
American Business Products	771
American Crystal Sugar	553
American Maize-Products	524
American Shipbuilding	792
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Ametek	504
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Angelica	828
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Applied Power	865
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Augat	847
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Most of the figures in this FORTUNE Second 500 Directory were prepared by reporter Elizabeth S. Silverman, who is responsible for the columns reporting on companies' sales, assets, net income, stockholder's equity, and the industry code numbers. Figures on earnings per share and total return to investors were prepared by Claudine Knight.

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Vermont American	783
Vernitron	953
Vulcan	906
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Wean United	707
Webb	960
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Why Tribune Co. Is Feeding the Chicago Cubs
Business's Not-So-Bad Year with Mitterrand

$3.00
June 28, 1982

FORTUNE

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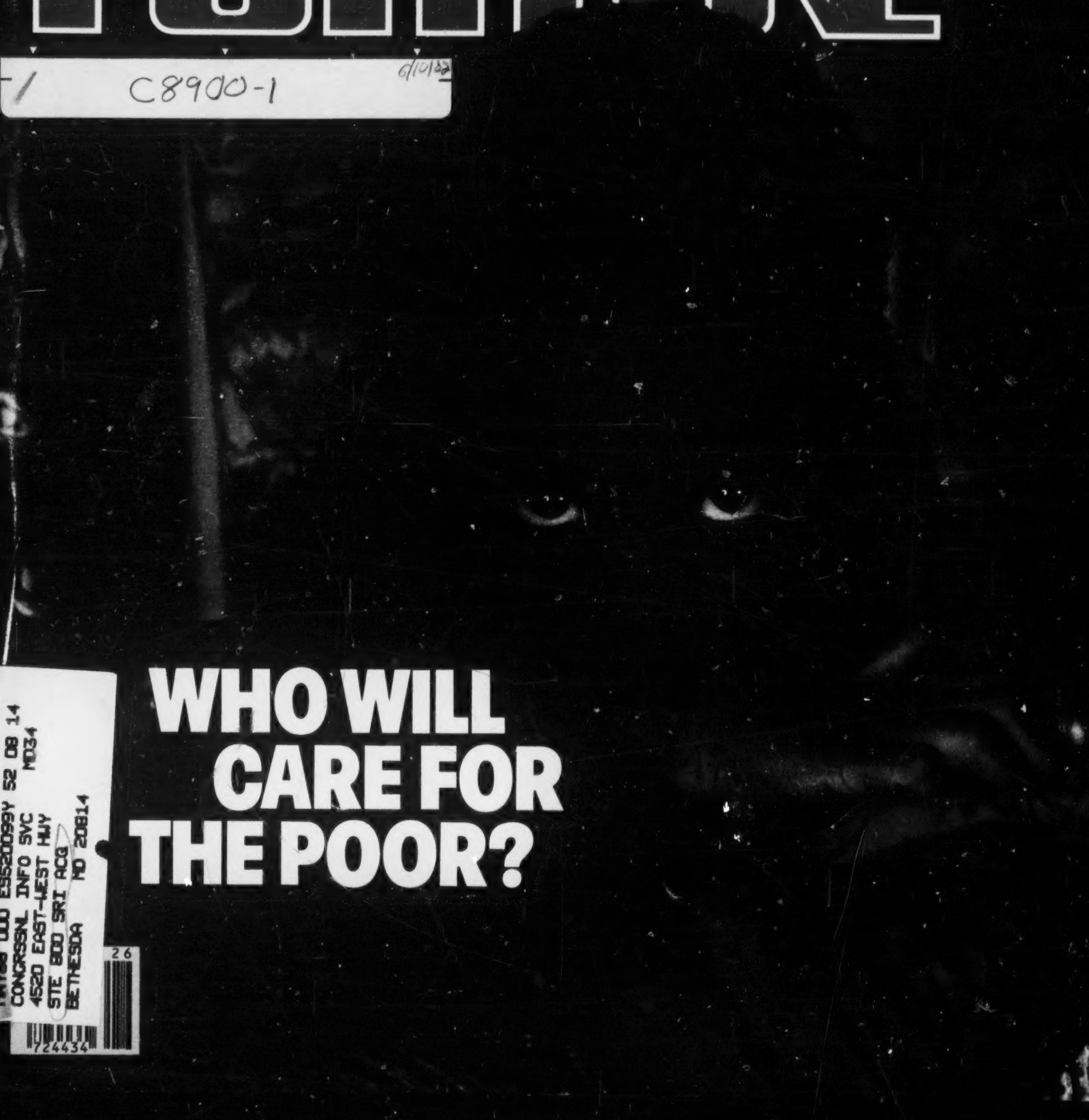

WHO WILL CARE FOR THE POOR?

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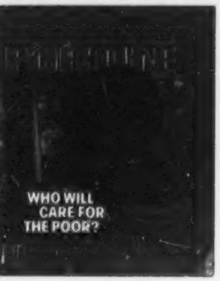

Charles Thorne, 9, lives on welfare with nine other members of his family in a shack in Mound Bayou, Mississippi, where he was photographed for the cover by Charles Harbutt. The future of the programs that support families like the Thornes is explored in the article on page 34.

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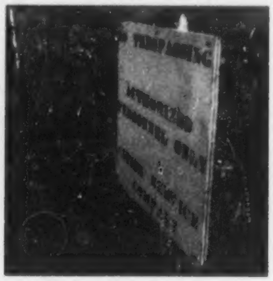

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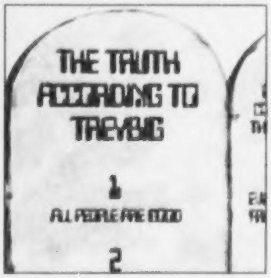

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Reagan's federalism would thrust responsibility for them onto the states. But some things in our society only Washington should do.

POLICY

Who Will Care for the Poor?

by WALTER GUZZARDI JR.

The capitol building in Jackson, Mississippi, has been undergoing restoration for several years now, and the state legislature meets in Central High School, just a couple of blocks away. An undistinguished red-brick structure, Central High appropriately sits in the center of Jackson—a flat, hot, pleasantly passive Southern city of 203,000 whose stores in the decayed downtown section have "Come In, We're OPEN" signs on hopeful display. Unexpectedly close to the dying core, magnolia-shaded houses of fading gentility display their charm and grace. Jackson may be only a middle-size capital, but the issues discussed at Central High recently have large dimensions. Broadly construed, they amount to nothing less than a test of President Reagan's plan for federalism—a test of the wisdom, that is, of turning over to states a wide range of social functions now discharged by the national government.

It seems unlikely that anyone in the Administration gave Central High much thought when the President, in his State of the Union message, reopened the complicated and deep-rooted subject of federalism. Then as now, more immediate questions filled minds and headlines, and Reagan's unexpected introduction of his "cherished dream" was looked on with distrust. He was accused of trying to distract attention from his domestic troubles, and of promoting under an elegant philosophical cover the dream that critics think he really cherishes—to cut social spending, and especially spending for the poor.

Research associate: Rosalind Klein Berlin

While these suspicions probably have some merit, the issues that Reagan raised are far more than just a feint. The President's proposal would make fundamental changes in the way the country is governed. His thesis has important deficiencies, but it is also thoughtful and provocative. Since he has advanced his ideas, they have been challenged on all sides—by Congress, the states, and the cities—and negotiations got hot enough recently so that David Stockman hastily backed off from testifying about the subject on the Hill. Clearly, Reagan's proposals are not going to be enacted as they stand. But his platform will remain the basis for a continuing national debate about the reorganization of public life as we adapt to newly recognized limitations.

Sound the retreat

The principal force of Reagan's argument comes from the hopeless overextension of the national government today. With a style and grandeur that transformed the fiscal foundations of the republic, the federal government for 20 years has poured out grants-in-aid to states and localities until scarcely a function remains at those levels that Washington doesn't own a piece of. For two decades federal grants grew after inflation at an average annual rate of 10%; in fiscal 1978 they hit a high of 17.3% of federal outlays. Last year grants ran to around $95 billion, or 14.5% of federal outlays.

The commendable purpose of the flow was to meet public needs. But in time the voice of states and local governments in determining those needs was all but drowned out in the roar of and the fight for federal money. Recipient governments became heavily dependent on the openhanded federal presence that, ambivalently, they both invited in and wanted out.

And now budgetary pressures make it imperative for the feds to get out. By some estimates federal domestic outlays will be reduced by 6% this year. And if the President gets even part of his way in the resolution of the budget, bigger reductions are coming.

In his State of the Union message President Reagan seized the opportunity offered by this economic reality to lay down his federalist principles. Reagan did not mention the *Federalist Papers*—as a great communicator, he probably feared the soporific effects—but the historic relevance remains. Once, our dual republic ascribed to the central government the encouragement of what the *Federalist Papers* call "the prosperity of commerce." Nurture of what one scholar describes as "civic virtue and public spiritedness," however, was left to the states. But since New Deal days, the government in Washington has become both the principal agent for commerce and the main protector of these values. To those tasks the Great Society added the objective of greater equality.

As a true conservative, Reagan rejects much of that doctrinal liberalism. His comment that people can "vote with their feet" by moving away from poorer states shows that state-to-state inequalities hardly trou-

continued

Poor People in the Poorest State

Verine Thorne of Mound Bayou, Mississippi, has double trouble: she is both a welfare mother and a welfare grandmother. Right now she gets $120 in welfare payments for herself and her five children. Her daughter Kathy Ann, who lives with her mother and has three kids under 4 years old, gets the same amount. Together they get $427 a month in food stamps. Mrs. Thorne, 46, chopped cotton from the age of 9 until four years ago, when she could no longer find work. "Anyway," she says, "I can't cut it no more." She pays $60 a month in rent for a broken-down, fly-blown shack in Mound Bayou, and doesn't know who the owner of the place is. Mound Bayou is an all-black community of 2,917; one person out of three there gets welfare payments or food stamps or both.

Photographs by Charles Harbutt–Archive

Care That Costs $1 Billion

In the Samaritan Home in West Bend, Wisconsin, about 200 of the 250 patients are on Medicaid. Most are old people like Anna Rolf, 89, who is being examined by Dr. Frederick I. Bush, 66, the medical director. In Wisconsin, Medicaid costs about $1 billion a year.

ble him. He displays far greater concern for the inequality between the national government and the states. Bureaucratic overcentralization, rather than social and economic inequalities, thus becomes Reagan's first enemy.

Acting on that conservative faith, Reagan would reverse the direction of recent decades and push a lot of government out of Washington. One radical change would transfer to states a large number of federal programs, which in 1981 cost about $40 billion, along with revenues from some existing federal taxes to pay for those programs. Then gradually the federal government would reduce its taxes, leaving states to decide whether the programs were worthwhile, and whether they wanted to apply their own taxes to carry them on.

Reagan would also transfer responsibility for welfare payments and food stamps, thus handing the states the leading social dilemma of our time. Of present supports for the poor, only Medicaid would be run by the federal government; all else would be out where the President thinks it belongs: as he says, "closer to the people it serves." In Reagan's total scheme, programs that cost some $96 billion last year would be switched around. After the full turn of Reagan's devolutionary wheel, the role of states in determining and filling public needs would be greatly enlarged, the federal role would diminish, and some government functions would wither away.

A test of character

Whether such a grandiose redistribution of the social functions of government would work depends in part on the character of state governments—it depends in part, symbolically speaking, on how well they have been doing in the anything but grandiose school auditorium in Jackson, Mississippi. Beyond that consideration, though, Reagan's effort ultimately requires a judgment about what the values of our society are, and whether state governments should be the ones to define those values and give them expression.

Despite all the myths, the competence of state governments is now surprisingly high, and looks better yet when compared with Washington. Since the Supreme Court's "one man, one vote" decisions starting with *Baker* v. *Carr* in 1962, every state has reapportioned its legislature. In the round, the result today is that the black minority is better represented in state houses than it is in the U.S. Congress. Blacks are now 11.7% of the U.S. population. The U.S. Senate has no black members; of the 435 voting members of the House of Representatives, 17, or 3.9%, are black. In the state legislatures, taken together, blacks constitute 4.4%. In Maine and North Dakota, where the black population is tiny, there are no black legislators. In Alabama, where blacks make up 25.6% of the population, their share of legislative seats is highest, 11.4%.

The once antiquated machinery of state government has also undergone extensive overhaul. Almost all state constitutions have been brought up to date in the last couple of decades. Legislatures used to meet so infrequently that sessions were something of an event; now, most con-

A few states remain retrograde monsters, but most have changed their ways.

vene every year. State legislatures have strong staffs that can draft clauses with the best of them in Washington. No one has yet devised a yardstick to measure corruption, but evidence doesn't support the legend that state governments are rotten with vice. The worst scandals of recent years have coiled around Capitol Hill.

The days of the pass-the-biscuits-pappy orators with string bow ties may not be entirely gone, but many states now have low-key, first-rate governors, some of whom make more sense than recent Presidents. William Winter, the governor of Mississippi, could hardly be more remote from the Southern pol of old: a well-educated, scholarly man, his chief weakness as a politician seems to be that he is too evenhanded. Richard Snelling of Vermont, a cum laude graduate of Harvard, is the dominant voice in the National Governors' Association, of which he is chairman.

In Mississippi, and in 45 other states, governors are now elected for four-year terms. Most can succeed themselves; all have veto power except in North Carolina. By yet another measure of democracy, states beat Washington by a provincial mile. Referendums in states are increasingly common: Alaska has gone to the voters for a judgment about mandatory deposits on containers, and California for a verdict on smoking in public places.

"Tax and tax, spend and spend"

Intricacies and absurdities are present in the way states run their fiscal affairs, but at least most work from understandable principles—and anyway, it would be hard for any state to do worse than the U.S. Congress is doing right this minute. All state constitutions except that of Vermont—a state not likely to lose its head—require their governments to balance their operating budgets every year. States run separate budgets for capital expenditures, and they can borrow for those purposes. Many states appropriate federal grants into their budgets, just as though they had raised the money themselves. Relative to Congress, that looks pretty good: states do not, and cannot, in the old phrase, "tax and tax, spend and spend, elect and elect."

When it comes to the ways they raise revenues, a few states remain retrograde monsters, but most have changed their ways. Forty-three impose personal income taxes, some tied to the federal tax system. Forty-five have sales taxes. Together, income and sales taxes make up 70% of the revenue raised by states, which seems a respectable proportion. And states have checked excessive reliance by local governments on the regressive property tax by clamping on ceilings or devising rebates.

Regional favoritism toward the wealthy, however, detracts substantially from this encouraging picture. When it comes to taxing, Southern states give more consideration to well-off people than to residents in general. In Mississippi the top tax rate on income is 4%, reached when taxable income exceeds $5,000 a year. From then on, the "progressive" nature of the tax stops for individuals and for corporations. In 1980 Mississippians paid $9.18 per $1,000 in personal income taxes, half the national average, while they paid sales taxes, less onerous to those well off, of $41.05 per $1,000, twice the national average.

In Jackson, anyway, that reluctance to tax translates into a reluctance to educate. Mississippi is the only state not to have kindergartens as part of public education. Governor Winter this year tried to increase the state's "severance tax"--a tax imposed when natural resources such as oil are "severed" from the ground, paid by the producer, and in large measure passed on to consumers in other states. Winter's case looked strong because the rate of the severance tax had not changed for 40 years, and because he wanted to use the proceeds for kindergartens. Intensively lobbied by the oil companies, and sadly enough influenced by the thought, says one journalist, that "kindergartens would just be day-care centers for black kids," the legislature turned the governor down.

The resistance of voters to spending increases, which partially explains Winter's licking in the kindergarten, was first understood by those running municipalities and counties. During the Sixties and early Seventies, state and local spending was a high-growth industry; in 1975 the two kinds of spending touched a high of 11.4% of GNP. But then voters raised their exasperated voices, and localities were quick to respond. They began to reduce per capita spending in real terms in 1975. Next to heed were the states: their spending spree ended in 1977. But the flow of funds from Washington to those governments kept growing until 1979. That year, the federal government gave states and localities 31.3 cents for every dollar they raised from their own sources. In 1980, the figure was down to a still substantial 30.4 cents.

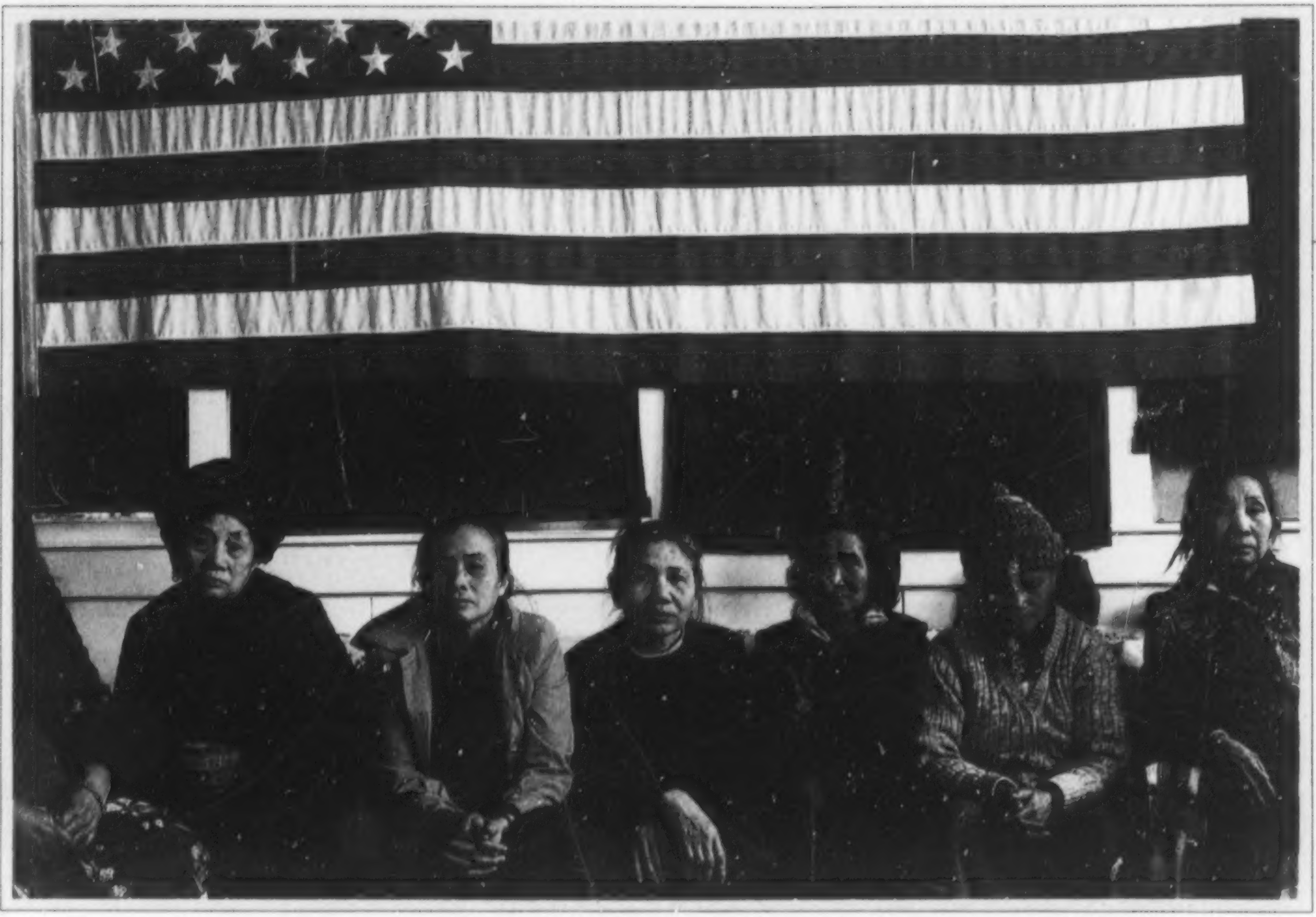
How much would states do?

The general competence and responsiveness of state governments are only part of the test of Reagan's federalist ideas. Beyond are harder considerations about how the poor would be cared for if states were wholly in charge of them. Relevant evidence lies buried in the mechanics of the welfare system and in measurements of the will and the capacities of states.

In the complicated machinery of welfare—officially, Aid to Families with Dependent Children—states play a subsidiary but important role as shapers of policies and dispensers of funds. The federal government sets the general criteria of eligibility, but states have latitude in deciding how much in the way of assets can disqualify a welfare applicant, for example. More important, states determine the amount to be paid to each welfare family.

The payment is made up of dollars from Washington and dollars raised by states, although in a handful of cases where big cities have special importance—New York is the leading example—local governments also contribute. Washington's share of the payment declines as the ratio of a state's per capita income to the average per capita income in the nation increases. At present it varies from 50% to 77% of a family's welfare payments. Administrative costs are divided equally between the two levels of government.

The striking contrasts that result from this curious hybrid born of political com-



The Sorrow of Laotians in Seattle

These Laotian refugees in Seattle await food parcels from a charitable agency. Federal aid to the refugees is ending, but both Seattle and the State of Washington believe they should remain a national responsibility.

promise can be seen in the wonderfully cautious ways of hot Jackson, Mississippi, as compared with the stunning generosity that governs in cool Madison, Wisconsin. The legislature in Jackson has fixed the lowest payments in the country, authorizing maximum welfare payments of $96 a month for the typical welfare family of three (see table on the facing page). Since Mississippi's average per capita income of $605 a month in 1981 was also the lowest in the country, the federal government paid 77%, or $74 of that $96. The payment of $96 amounts to 16% of the state's average per capita income. But the state's share, $22, is only 4% of per capita income.

The model state of Wisconsin looks at a different world with a different eye. Welfare payments there come to $473 for a family of three. The state's average monthly per capita income was $838 in 1981. On that basis, the ratio of payment to income is 56%, against Mississippi's 16%. Wisconsin's share of the $473 welfare check is $199. On *that* basis, Wisconsin is paying 24% of per capita income, compared with Mississippi's 4%.

Rush not to judgments, ye who enter here. History's influence, cultural patterns, and the mix of population are all determinants of a state's attitude, and no calculus yields conclusive information about good or bad, right or wrong. In Mississippi, the poor, who are mostly rural, make up 25% of the population, the highest proportion of any state in the country. To help them, the state will spend $212 million of its own funds this year. And in that once openly racist state, 86% of the people helped by welfare payments are black.

In Wisconsin the social fabric is entirely different. The state has always been in the vanguard of social programs: it was the first state to impose a progressive income tax, and started education for the handicapped before the federal government did. But then—Wisconsin has rich farmlands, sizable industry, and a high literacy rate. Blacks are only 3.9% of the population, concentrated in Milwaukee; only 8.5% of the total population is poor. One quarter of Wisconsin's budget goes to help the needy, while Mississippi spends one-sixth of its budget for the same purpose. But given all the differences between the states in resources, culture, and financial needs, Mississippi is not greatly to be faulted.

The complexity of the relationships of states to welfare multiplies when it comes to Medicaid. By federal law all recipients of welfare checks are eligible for Medicaid. Federal law also mandates coverage for certain services, but states may increase the benefits beyond these minimums. Generally, payments for Medicaid are covered by the same formula as the one that

A Gamut of Generosity

President Reagan's suggestion that responsibility for welfare and food stamps be turned over to the states has raised questions about how the poor would fare under such a system. One indication is the contributions that states now make to the poor. The dollar amounts of welfare payments to a family of three are set by each state. The table shows what those amounts were in November 1981, and how much of that was put up by the state as opposed to the federal government. By themselves, though, the absolute amounts don't tell much about a state's generosity, since resources and per capita incomes vary widely from state to state.

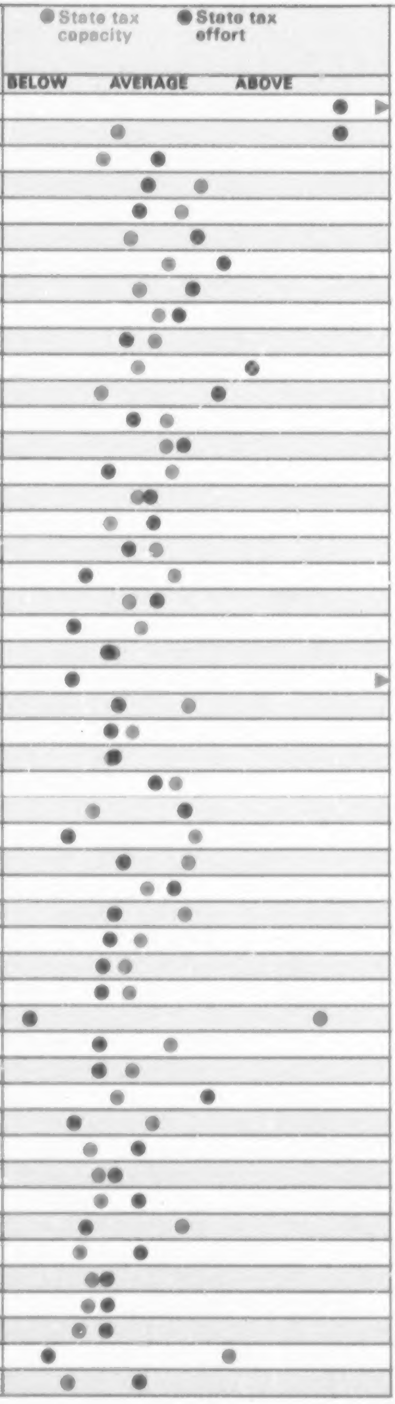
One way to judge a state's concern for the poor is to compare its contribution to welfare with its average monthly per capita income. By that measure, New York is the top performer. The Southern states generally are underachievers.

The Advisory Commission on Intergovernmental Relations, a research organization, assesses generosity in a different way. ACIR believes that per capita income, while an accurate reflection of a state's well-being, is not always a reliable indicator of taxing capacity. ACIR puts together all potential sources of a state's tax revenue, such as personal income, retail sales, and natural resources, and computes per capita tax potential. That potential is shown as "state tax capacity" (blue dot) in the right-hand column. A state's "tax effort" (red dot) is based on the ratio of actual tax collections to tax capacity.

Despite its high per capita income, New York has a below-average tax capacity. But its tax effort is the highest in the country. When looked at along with the state's high welfare payment of $507, the indices pretty clearly show that New Yorkers are heavily taxed to help the poor. Texans, however, are unmoved by similar impulses: their tax capacity is the fourth highest in the country and their tax effort the second lowest. The social attitudes of Texas are congenial to Wyoming, where the nation's second-highest tax capacity supports the fourth-lowest tax effort.

The blue arrows used for Wyoming and Alaska indicate taxable wealth so high it runs off the chart.

	Monthly welfare payment	State share	Share as percent of per capita income
Alaska	$571	$286	24%
New York	$507	$249	26%
Vermont	$506	$159	22%
California	$506	$253	25%
Connecticut	$498	$249	23%
Wisconsin	$473	$199	24%
Hawaii	$468	$234	25%
Michigan	$464	$232	25%
Minnesota	$446	$203	23%
Washington (State)	$415	$208	22%
Massachusetts	$379	$176	19%
Rhode Island	$367	$155	18%
Iowa	$360	$161	19%
New Jersey	$360	$180	18%
Kansas	$353	$168	19%
Nebraska	$350	$147	17%
Utah	$348	$109	16%
Oregon	$339	$160	19%
North Dakota	$334	$127	14%
Pennsylvania	$332	$143	17%
New Hampshire	$326	$132	16%
South Dakota	$321	$102	14%
Wyoming	$315	$158	16%
Colorado	$313	$149	16%
Virginia	$310	$134	15%
Idaho	$306	$105	14%
Illinois	$302	$151	16%
Maine	$301	$ 88	12%
Oklahoma	$282	$113	13%
Montana	$278	$ 90	12%
Maryland	$270	$135	14%
Delaware	$266	$133	14%
Ohio	$263	$118	14%
Indiana	$255	$110	12%
Missouri	$248	$ 98	12%
Nevada	$241	$121	12%
New Mexico	$233	$ 76	11%
West Virginia	$206	$ 66	9%
Arizona	$202	$120	15%
Florida	$195	$ 82	10%
North Carolina	$192	$ 62	9%
Kentucky	$188	$ 60	9%
Georgia	$183	$ 62	8%
Louisiana	$173	$ 57	7%
South Carolina	$129	$ 38	6%
Arkansas	$122	$ 34	5%
Tennessee	$122	$ 38	5%
Alabama	$118	$ 34	5%
Texas	$116	$ 42	5%
Mississippi	$ 96	$ 22	4%



The behavior of states toward the poor is a trip from Jackson to Juneau.

governs welfare. Under its Medicaid program, Mississippi does not go much beyond what the government mandates. The state portion of the payout comes to around 23 cents of every dollar spent on Medicaid there. That may sound low, but Arizona, exercising its sovereign right to turn down federal money, has no Medicaid program at all.

Up in Wisconsin they might have done better to control their generous instincts a bit along Arizonan lines. Wisconsin offers just about every kind of Medicaid service, with the result that, admits Donald Percy, the state's director of health and social services, "our costs are now out of control." Wisconsin spends $440 million a year of its own funds, or $108 per capita, on Medicaid; Percy predicts that the sum will be $14.3 billion in 20 years if the growth is not checked. Giving less as Mississippi does, or nothing as Arizona does, may be easier than taking back what has been given, as Wisconsin now must do.

Balm from Big Brother

Food stamps, a kind of balance wheel in the welfare scheme, break out of the mold of hybrid services. They are entirely paid for by the federal government, and eligibility, determined in Washington, is based on the single criterion of income. The dollar value of the stamps that recipients get is based inversely on the size of their welfare payments, less deductions for medical expenses and certain other costs. Tying food stamps to welfare payments in that way allows states making low payments to rely on Washington for balance. In New York, where welfare payments for a family of three come to $507 a month, second highest in the country, the value of food stamps for the same family is $100. But in Mississippi, that $96 welfare check is supplemented, to put it conservatively, by food stamps worth $183. States may decide not to try as hard as they might because free balm for their consciences is always en route from Washington.

The question of just how hard a state *should* try may belong in Solomon's lap, not Reagan's, but ways of measuring how hard they *do* try can be enlightening. The Advisory Commission on Intergovernmental Relations, a congressionally financed body that leads the research in this field, judges a state's "tax effort" by measuring its actual tax collections against all its potential sources of tax revenue (see table on the preceding page). Looked at that way, the legislators in the school auditorium in Jackson aren't performing badly. Mississippi has the lowest taxable resources in the country. But the tax effort coming out of Central High stands close to the national average. By contrast, Texas, with all its lovely oil and natural gas, has a lot of taxable wealth. But Texans and taxes don't mix: their tax effort is the lowest in the land. Of the rich states, Alaska seems the one with the heaven-sent quality of mercy: both its tax wealth and its tax effort are far above average.

In the panoptic view, then, while state governments seem reasonably competent, their behavior toward the poor shows only diversity and no generality: it is a trip from Jackson to Juneau. Against that variegated background, what can one make of Reagan's grand scheme for devolution?

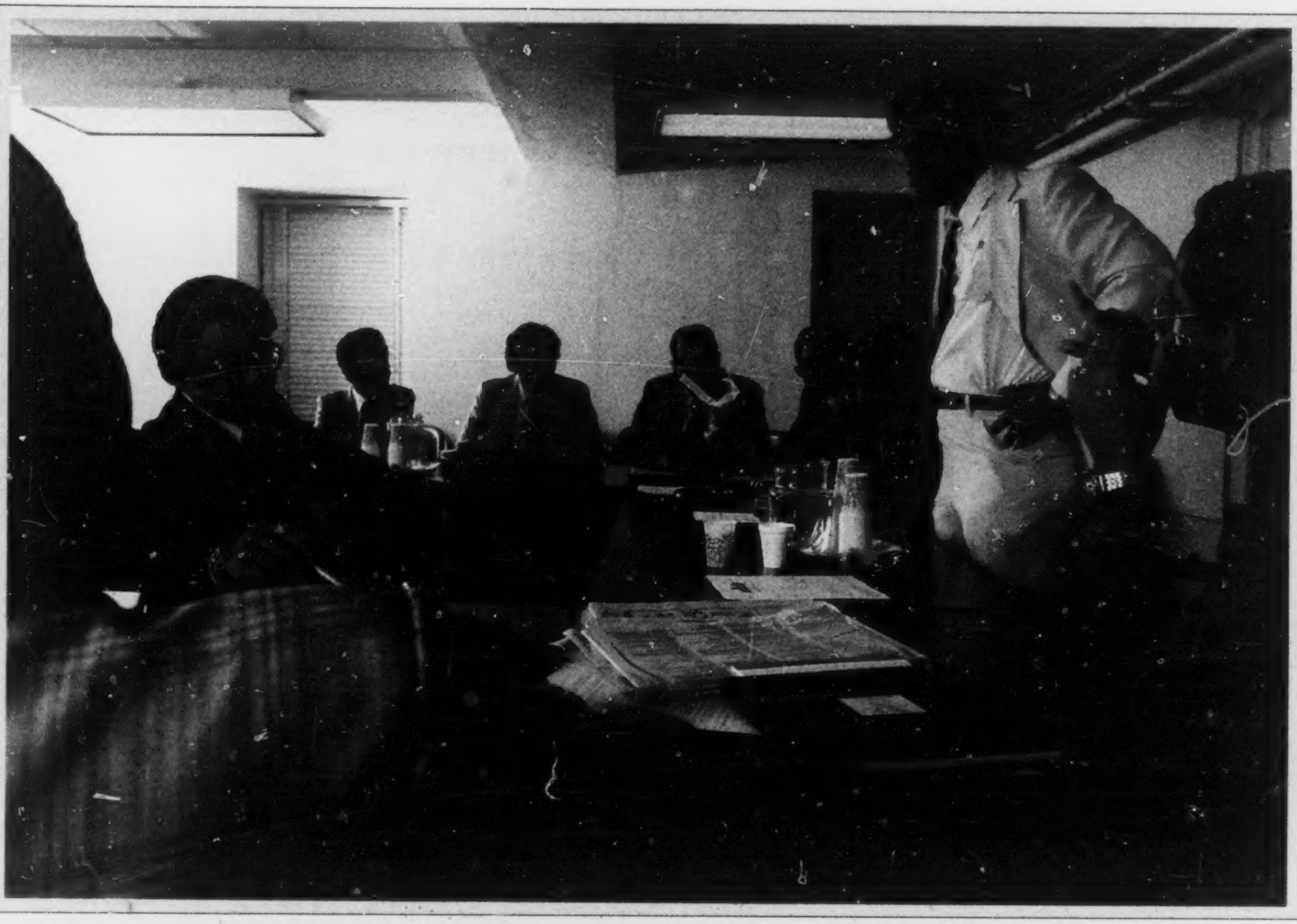
The most promising part of Reagan's realignment comes with the proposal for radical reform of the increasingly unsatisfactory grant-in-aid system, which has reached heights of complexity that dizzy the mind. By moving that big slice out of Washington, Reagan would take advantage of the states' new abilities, while correcting the federal government's deficiency. All our experience with the brotherhood of social engineers suggests that the federal government must stop specifying and prescribing for all social needs. Reagan's corrective would give 40-odd federal programs, many tightly controlled, to the states to run. Right now those programs are overlapping, bewildering, and at a total of some $40 billion, very costly. Last year they were paid for by 125 separate grants, and aimed at groups of beneficiaries described in tables that sort out people as though they were different kinds of vegetables. Included in the programs are such items as "metric education," "summer feeding," "career education incentives," "special meal assistance," "hypertension"—enough to make a marvelous Gilbert and Sullivan aria.

For Congress to spend days debating the proper nutritional balance for a school kid's lunch is surely a dispensable absurdity. Democratic Governor Bruce Babbitt of Arizona has said that Congress "ought to worry about arms control and defense instead of potholes." In that case Babbitt thinks "we might just have both an increased chance of survival and better streets."

Reagan's program would also turn back the federal invasion of cities, and that too seems a good idea. Direct federal grants to localities came to around $20 billion last year—half the $40 billion in all grants not directly connected to payments for the poor. Samuel Beer, the noted Harvard political scientist, says the establishment of that federal-government-to-city relationship "was without precedent in the American or any other federal system." Federal grants have blanketed almost every urban activity, and have often left city governments overwhelmed. In El Paso, Texas, eagerness to start projects that qualified for federal money led to big annual increases in the city budget in the early Seventies. Then when Congress ended countercyclical revenue sharing, El Paso was forced into a fire sale of city land to keep afloat.

Gripes from the mayors

Reagan would head off such problems by virtually ending the direct Washington-to-cities link and interposing the states between the federal government and the cities. The idea troubles mayors, who with considerable justice say that the neglect of urban areas by states was what brought the feds into the act in the first place. Mayors also properly point out that state legislators like to give everybody in the assemblage a little something to take home, with the result that some cities, of which Baltimore is notable, come out on the short end. On balance, though, in the light of all those costly federal failures, a restoration of the traditional ties between states and cities looks more promising



A Black Caucus in Mississippi Mississippi's legislature has 17 blacks. David Green (standing), 30, deals with welfare. Another leader, Aaron Henry (dark suit, facing camera), 59, thinks federalism is as good news for Mississippi as Grant's siege of Vicksburg.

than just more, or a little less, of the same old thing from Washington.

On the whole matter of grants, however, Reagan's federalist ideal clashes with present hierarchies of power. Congressmen like credit for spending federal money back home. Reagan himself lost a passage of arms with Congress last year when he tried to consolidate grants costing about $16.5 billion into seven blocks. Congress pared down important parts of the proposal. In the end, according to Richard Nathan, a former OMB official who is now head of Princeton's Urban and Regional Research Center, Reagan's plan was "reduced in amount and diluted in purity."

In addition, the specifics of Reagan's idea for transferring programs and a trust fund to states have run into a good deal of trouble. Reagan wanted states to take over those 40-odd programs and carry them on, if they wanted to, with revenues from taxes that the federal government would gradually give up. But his claim that no state would suffer financial loss in the transition is disputed by many state governments. Also, considerations of equity have yet to be addressed: states do not have equal capacities to raise money by the taxes that the federal government would be relinquishing, and need may be greatest where capacity is lowest. For example, the windfall-profits tax, which was intended to make up part of the fund, is significant only for the eight states that are the big oil and natural gas producers.

When it comes to his dramatic and unexpected proposal for turning the country's poor over to the states, though, Reagan's devolutionary plan is shot full of shortcomings, which may be explained by his old ideas about the poor and about where social obligations lie. The idea with merit, perversely enough, recommends not devolution but centralization. Right now, Medicaid is a formula for disaster. The certainty of incoming money from Washington in amounts greater than they put in themselves has led states—remember generous Wisconsin—to expand coverage heedlessly. And on the federal side, the sky's the limit: federal expenditures can't be capped, and congressional review is discouraged because nothing less than rewriting the law can check costs anyway. Further, states whose contributions are only 25 cents or so on the dollar—remember skimpy Mississippi—have little incentive to track down abuses: they pay half the administrative costs of the tracking, while 75% of what they save goes to the U.S. Treasury. So Medicaid, which started in 1966 at $363 million, cost $30.4 billion last year—more than twice as much as welfare payments, and 2½ times the cost of food stamps.

continued

The real "welfare mess" does not come from waste and fraud, but from welfare's hybrid nature.

If Medicaid were centered in Washington, at least the chance for control would open up. The horrendous "sky's the limit" character would change once mandatory matching of state money was ended. And on a nationwide basis, the range of covered services could be reduced: the federal government could not possibly pay for everything that the most generous states now offer—"that would be a break-the-bank proposition," says Kenneth Howard, for four years Wisconsin's budget director, who ought to know. To take away from people what they have become accustomed to being given would cause an outcry. Unfortunately, the outcry would be loudest in states that have been doing the most, since beneficiaries there would be losing the most. But there's no way out of the morass that doesn't hurt somebody.

The protests might be muted if a move to Washington restored some much needed equity to Medicaid, which is now as unfair as it is costly. At present, some poor people are excluded from Medicaid because, for one reason or another, they are not on the welfare rolls. On the other hand, according to the Congressional Budget Office, over five million people eligible for Medicaid have incomes twice the poverty level or higher. Extreme state-to-state variations in amounts spent—from zero in Arizona to $1,985 per recipient per year in New York—reinforce the arguments for uniform standards and administration. Also, Medicare, the medical program for the elderly, is run from Washington, and the two programs belong together.

A striking antithesis

Those marshaled arguments in favor of Reagan's contention that Medicaid belongs in Washington, however, cut forcefully *against* Reagan's desire to turn welfare over to the states. The antithesis is so striking that it has added fuel to speculation that the President doesn't care about the poor. Reagan can suffer the idea of having the national government give poor people medical care by paying those who profit by supplying it to them, runs the rationale; what he can't stomach is the idea of just handing them money.

Of all the moral entanglements of welfare, none is more troublesome than the unequal treatment given by that costly effort to help poor people. Oil-rich Texas, for example, makes the second-lowest average welfare payments in the U.S. after poor Mississippi. The payments in Texas actually fall short of the level of need set by the state itself. To turn welfare entirely over to the states would ensure that such inequities, already a discredit to a creditable national effort, would multiply. Economies of states swing more widely than the national economy does, and to some degree the well-being of states is determined by policies in Washington and other factors outside state borders. To tie care of the poor to that roller coaster every year is unconscionable. Further, Richard Nathan of Princeton believes that if they had to bear the entire welfare burden, states would step up their competition to hold down benefits and tighten eligibility.

Right now, the unequal benefits are not marked enough to touch off migrations. People apparently travel to look for jobs, go on welfare when they can't find them, and then, if they are in a state where benefits are high, tend to stay there—caught in "the welfare trap." But should the difference in payments grow sufficiently, migrations toward welfare might begin. Imbalance in jobs and growth patterns could follow—"bad economics, and far from the free market that Reagan says he wants," comments Nathan.

Perhaps the strongest argument for turning welfare over to states comes from Reagan's own belief that "there's much more chance of waste and fraud in trying to run welfare from the national level than there is in running it at the local level." Despite that reasonable assumption, though, the real "welfare mess" does not come from waste and fraud, but from welfare's hybrid nature, which makes it impossible to hold any single government responsible for handling welfare well or badly. In any case, to weed out cheats is not to effect reform. The principal accomplishment of Reagan's devolution in this field would be to disencumber the national treasury of a heavy burden—but only by fragmenting the burden and shifting it elsewhere.

The rest of Reagan's initial scheme for federalism calls for turning over food stamps to the states. But the determinant of who runs food stamps should depend on who runs welfare, which food stamps support. The principal defects in food stamps arise from their being fully paid for by Washington but distributed by state and local governments. When funding and administration are thus divorced, restraint and frugality find no sponsor.

Fitted for a straitjacket

Anyone proposing with certitude that to place costly, trouble-ridden, Washington-invented, Washington-shared programs wholly in the hands of Washington would improve them is sure to attract measuring glances from tailors of straitjackets. Still, more evenhandedness could result from national standards of eligibility and nationally determined levels of payment. Further, the curse of matching grants, which compels the feds to match state dollars endlessly, could be removed. Administration could be centralized, offering a bit of hope, anyway, that some of the present schizophrenia and the costs that go with it would be corrected.

On balance, Reagan's ideas, commendably, would reduce the federal role in important ways. But where they fall short in humanitarian terms, they would make us less than we are. *Federalist Papers* or not, in modern times the expressions of our highest values—our desires to stay free, to eliminate racism, to care for the elderly and the poor, to let ideas compete freely—have come from the national government and from national leadership. Those values cannot be fixed at the Office of Management and Budget. Nor can their defense or enlargement be entrusted to 50 little republics with uneven resources, with limited control over their own prosperity, with borders that make no modern sense, and with environments that can narrow minds. Even if these little republics are competent, our values transcend them.

OIL

Treasure Hunt at Cities Service

by PETER NULTY

It's a commonsense axiom in the takeover game that unwanted suitors are attracted by large hunks of real assets—spare cash in the bank, say, or proved energy reserves in the ground. The lure of Cities Service Co., however, is buried treasure that may or may not exist. With revenues of $8.9 billion, the Tulsa-based company last year was the 19th largest in the U.S. oil and gas industry, but it holds the sixth-largest cache of undeveloped domestic land—10.6 million acres under lease. No one knows how much of that land is energy rich and how much is just, in industry parlance, "moose pasture."

Nevertheless, T. Boone Pickens Jr., 54, the chairman of Mesa Petroleum, is dying to get his hands on it. Last week he announced he was willing to pay $50 per share for Cities stock, then selling at $35.50. Generally, where Boone bets, the moose don't graze. An aggressive exploration company based in Amarillo, Mesa is one of the few U.S. energy companies that have managed to increase reserves significantly in the past few years. Pickens, who sued Cities last year when it fended off his earlier advances, won't discuss what he would do if he got control, but security analysts expect he would hang on to the production properties and the unexplored acreage and sell off a slew of nonenergy businesses as well as many assets in oil refining, marketing, and transportation.

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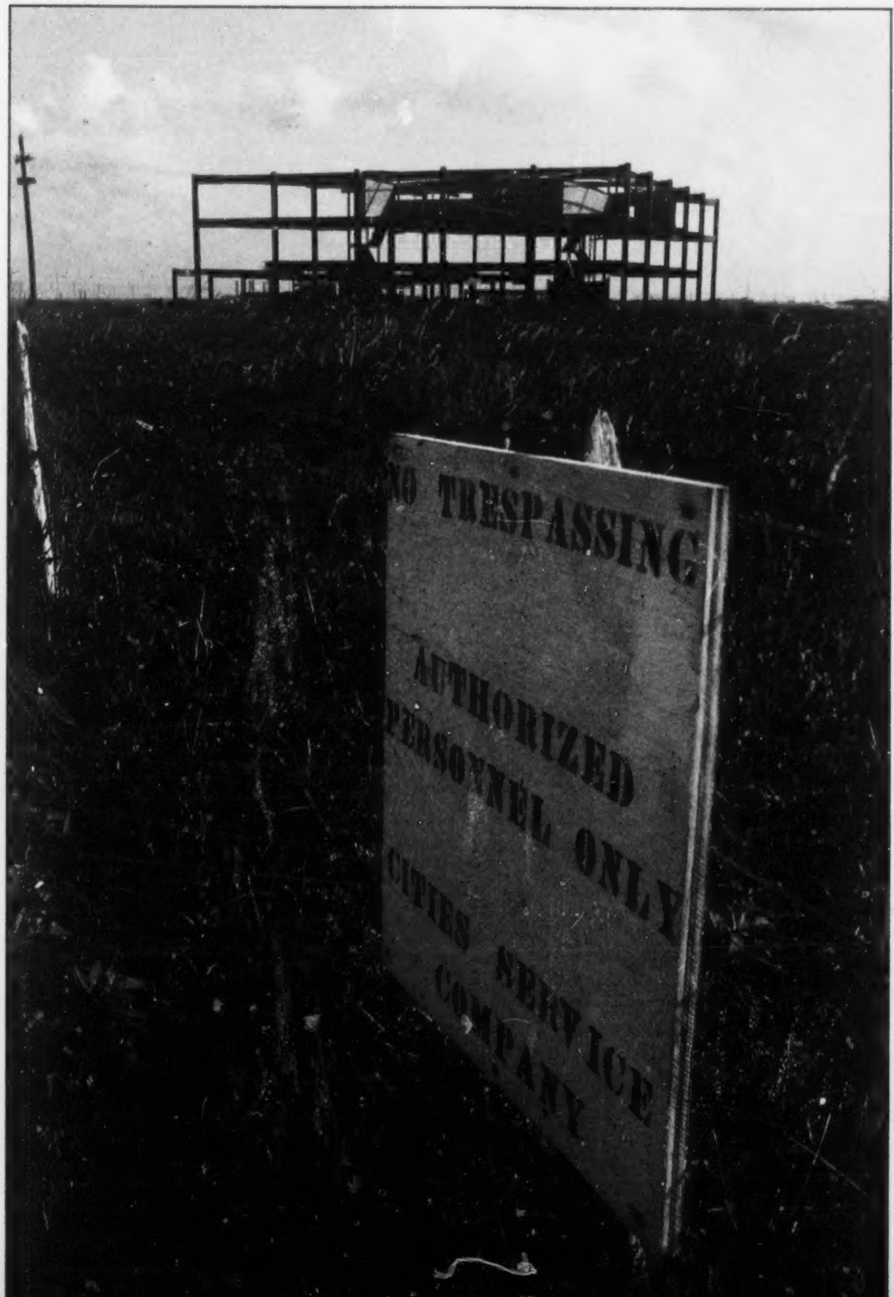


In past years Cities poured much of its oil earnings into diversification rather than the search for new reserves. This skeleton of an office building near Bay City, Texas, was to have been part of a $300-million plastics complex. In January the company suddenly got out of plastics—writing off $290 million as it went.

Mark Godfrey–Archive

Mark Godfrey–Archive

Examining color-coded seismic charts, Chairman Charles Waidelich (right) and President Robert Chitwood are finally gearing up to explore Cities' vast oil and gas lease holdings—a job Mesa Petroleum's chairman, T. Boone Pickens Jr., would like to take over.

Charles Waidelich, 53, chairman of Cities, has done practically everything but mine his acreage to keep Pickens away. Though Mesa's sales—$366 million last year—are less than 1/24 of Cities', Waidelich takes Pickens's taunts seriously. Mesa acquired 5% of Cities late in 1980 and has been trying ever since to arrange financial backing to get the rest. Last summer Waidelich discussed merger with Conoco as a defense, but the talks fell through shortly before Conoco was swallowed by Du Pont. Then Waidelich arranged a $3.5-billion line of credit as a "defense fund." Last September he drew on $300 million of that to purchase a block of Cities shares from Nu-West Group, a Canadian company that Waidelich believed was planning to sell out to Mesa. It was an expensive maneuver—Cities paid a hefty $51 a share, a total of $307 million—but it kept another 7% of Cities shares out of Pickens's hands. Waidelich's latest defensive ploy was a turn-the-tables bid to buy Mesa.

All the fireworks may attract other contestants, but Cities at the moment is no prize. Ironically Waidelich's own plans to shape up the company bear more than a chance resemblance to what is generally regarded as Pickens's scheme. In the past Cities has frittered away money on diversification that might have been more profitably used hunting for oil and gas, and a lot of mistakes came home to roost last year. Only 14 months ago when Waidelich took over as chief executive from Robert Sellers, who retired, Cities had just wrapped up 1980 with a resounding cheer, earning a record $478 million. Renowned as a sluggish performer in the oil and gas patch, Cities' return on equity was a handsome 19% that year and the company was predicting better earnings in 1981. But just when things were looking up, the earnings started disappearing.

A goal not set

As the oil glut developed and prices started falling, Cities was particularly vulnerable. In the 1970s it scattered its resources in a broad campaign of diversification. It spent $150 million to open a copper mine in Arizona. It put up an iron-pelletizing plant in Tennessee that was closed and written off in 1978 for $160 million. It sank $380 million into the plastics business, and in a particularly ill-timed purchase, it shelled out $77 million for some coal reserves in 1980, just before a spate of coal properties landed on the market. All the while, Cities' reserves of oil and gas, like those of many other companies, were declining. "Sellers always talked as though the last great oil well might have already been drilled," says Philip Wood, who resigned as chief financial officer last year. "They should have set a goal for replacing reserves and stuck to it."

The wisdom of that hindsight was royally bared when oil prices slipped last year. The most profitable sector of the industry these days is domestic oil production. Cities produces only about half its needs. The rest is bought on the open market, where crude prices, although falling last year, were sometimes higher per barrel than prices of refined products. As a result, Cities' profits from refining, marketing, and transportation operations plunged from $203 million in 1980 to $2.6 million last year. The company produces almost all the natural gas it needs and has a highly profitable natural-gas-liquids business, but demand for these products was dropping as well.

Even leaving aside the specter of a battle with Mesa, Waidelich's year began to look ominous early. In March 1981 the company's estimate of net earnings for the year dropped from $490 million to $400 million, in June to $360 million, and in September to $290 million. The final truth came to rest at $240 million on revenues of $8.9 billion. As cash flow ebbed, Waidelich was forced to increase debt—from 31% to 45% of capital—to fend off Pickens and Nu-West and to keep capital spending on track. Waist-deep in trouble by year-end, Waidelich decided to take a bath. Last January he shut down the money-losing plastics operations and wrote off $290 million. The final tally: Cities lost 60 cents a share, down from earnings of $5.73 the year before.

Much of this pain seems to have been avoidable—the plastics disaster, for example. In the late 1960s, when the plastics industry was growing rapidly, Cities built a plant to produce low-density polyethylene

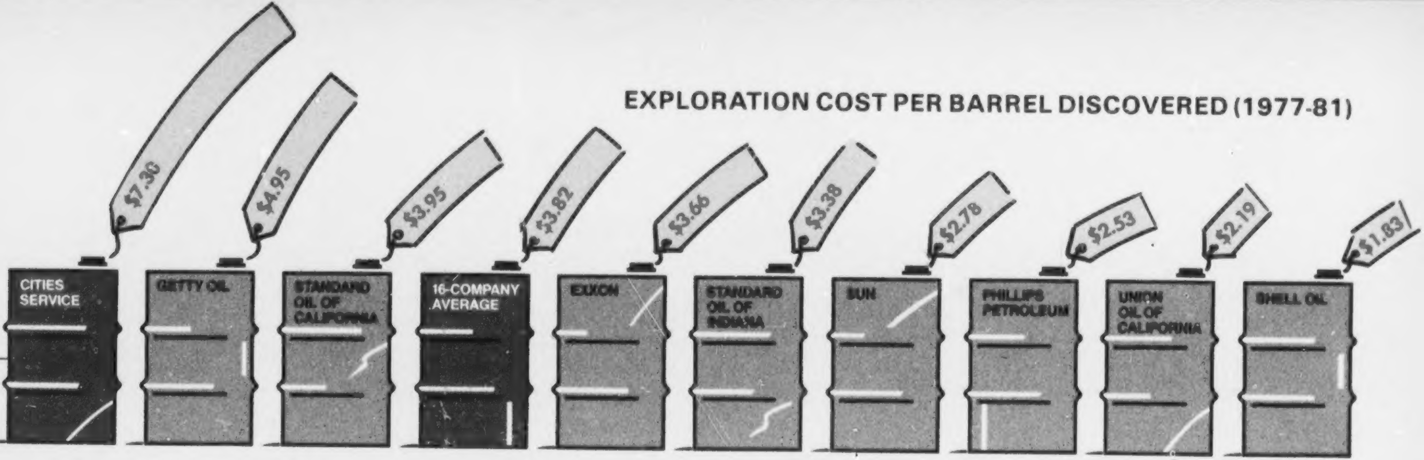
Cities Service plastics operations

YEAR	CAPITAL INVESTED (MILLIONS)	INCOME/LOSS AFTER TAXES (MILLIONS)
1976	$7.8	$15.8
1977	$8.8	$6.2
1978	$49.4	-$3.3
1979	$88.4	-$13.1
1980	$71.9	-$11.1
1981	$111.1	-$335.6

In the past six years, Cities has poured $337 million into the plastics business while the profits just melted away.

Research associate: Wilton Woods

EXPLORATION COST PER BARREL DISCOVERED (1977-81)



Source: Morgan Stanley & Co.

Spending More and Finding Less

In a study of 16 major oil companies, Morgan Stanley & Co. found Cities spent $7.30 for every barrel of oil, or its equivalent in gas, discovered between 1977 and 1981. Cities' costs were the highest in the group, 91% above the average.

(used in films and packaging) and hired Philip Wood from Union Carbide to run it. Wood recommended that Cities develop a market niche for its product before expanding, but Cities wanted growth fast. It reassigned Wood to head the corporate-planning department, doubled the capacity of the plant (a project completed last year), and broke ground near Bay City, Texas, for a new plant to produce a high-density polyethylene.

Meanwhile, several chemical companies came out with a low-density polyethylene that was superior to Cities' product. As overcapacity mounted, Cities' losses grew from $3 million in 1978 to $49 million last year. (See the table on the facing page.) And even though foreign oil-producing countries were busily announcing polyethylene plants, as late as last June a Cities Service magazine was promising "coast to coast commitment to plastics," where the "growth potential is tremendous."

Asked why Cities didn't bail out sooner, President Robert Chitwood replies, "Conditions changed last year. We looked at the capital needs down the road and thought, 'My God!' " Philip Wood sees it differently: "They spent $111 million on plastics last year, and then they just shut the SOB down. Things don't change *that* fast." Concurs one security analyst, "Cities has a well-known propensity to bleed awhile before it applies first aid."

While Cities was unable to bring its diversification into focus, it was just as fuzzy about energy exploration. Primarily a domestic producer, Cities began spending a third of its exploration budget during the 1970s looking for a big discovery in unexplored areas overseas. That major undertaking hasn't produced much so far. At the same time, the company was accumulating its enormous portfolio of domestic exploration leases. Although the exploration budget has quadrupled since the oil crisis hit in 1973, it was never large enough for so much land. Reserves can be bought as well as discovered, of course, but Cities hasn't had much luck in the bidding.

If he can avoid being picked off by Pickens, Waidelich plans to sell off the company's Arizona copper mine and the industrial-chemicals plant in Tennessee, and raise whatever he can from selling the plastics assets. The cash from the sales, along with most of the company's other cash, will be dedicated to exploration and production.

Missing the target

Retrenchment is a natural course for a company that has traveled too far afield. But Cities will have to do more than redeploy its assets; it will have to bring more people who understand exploration and production into positions of power and influence in top management. For years the company has been run by executives—Sellers, Waidelich, Chitwood—who came up through the refining, marketing, and transportation side of the company. Cities has done a lot of things right in these areas: it got rid of its old, inefficient refineries over a decade ago and was a leader in switching in the early 1970s from inefficient, full-service gas stations to high-volume, self-service outlets called Quik Marts. But Cities chief executives, when venturing into fields outside their areas of expertise, have either stumbled or hedged their bets to the point of suffocation.

And Cities hasn't been getting results from the money that did go into exploration. In the past five years, the company has spent more money per barrel of oil equivalent discovered than any of 16 companies surveyed by Morgan Stanley security analyst Barry Good (see the price tags on those barrels above). That could mean that Cities scientists aren't hitting their target as often as they should, or it could mean there's more moose pasture in Cities' leases than many people, including Boone Pickens, suspect. Cities claims there is a three- or four-year lag between exploration of a site and the logging of any reserves discovered. The company believes the hefty increases in the exploration budget of the past few years began to be felt in 1981, when 57% of U.S. production was replaced with new domestic reserves. That's the company's highest replacement ratio in years, but it's still below the average of 64% in the Morgan Stanley group. (Last year Mesa replaced 163% of its oil production and 158% of its gas production.)

Now, because of the drubbing Cities took last year, the exploration budget is momentarily stalled again. To compensate, Cities signed last January a deal in which five insurance companies agreed to spend $437 million to explore 8.3 million acres in the U.S. over the next four years.

Just as important for Cities is exploration in frontier regions offshore and abroad. Although foreign reserves are less secure and less profitable than domestic reserves, they may be the only hope for ensuring ample crude supplies for the long run. Cities has leases to explore a number of untried areas in Africa, the Philippines, and Pakistan. Albert Anton, a security analyst at Carl H. Pforzheimer & Co., believes Cities has an excellent portfolio of frontier prospects. "It's an explosion waiting to happen," he says.

Waidelich, who is facing another slow year for earnings, concedes that Cities "needs a big one." A consolation to Cities' shareholders, if not to Waidelich, is that if he doesn't find it someone else might. ▣

Fortune's Forecast for the Next 18 Months

Banking's New Stars: Women

The Largest U.S. Non-Industrial Corporations

$3.00
July 12, 1982

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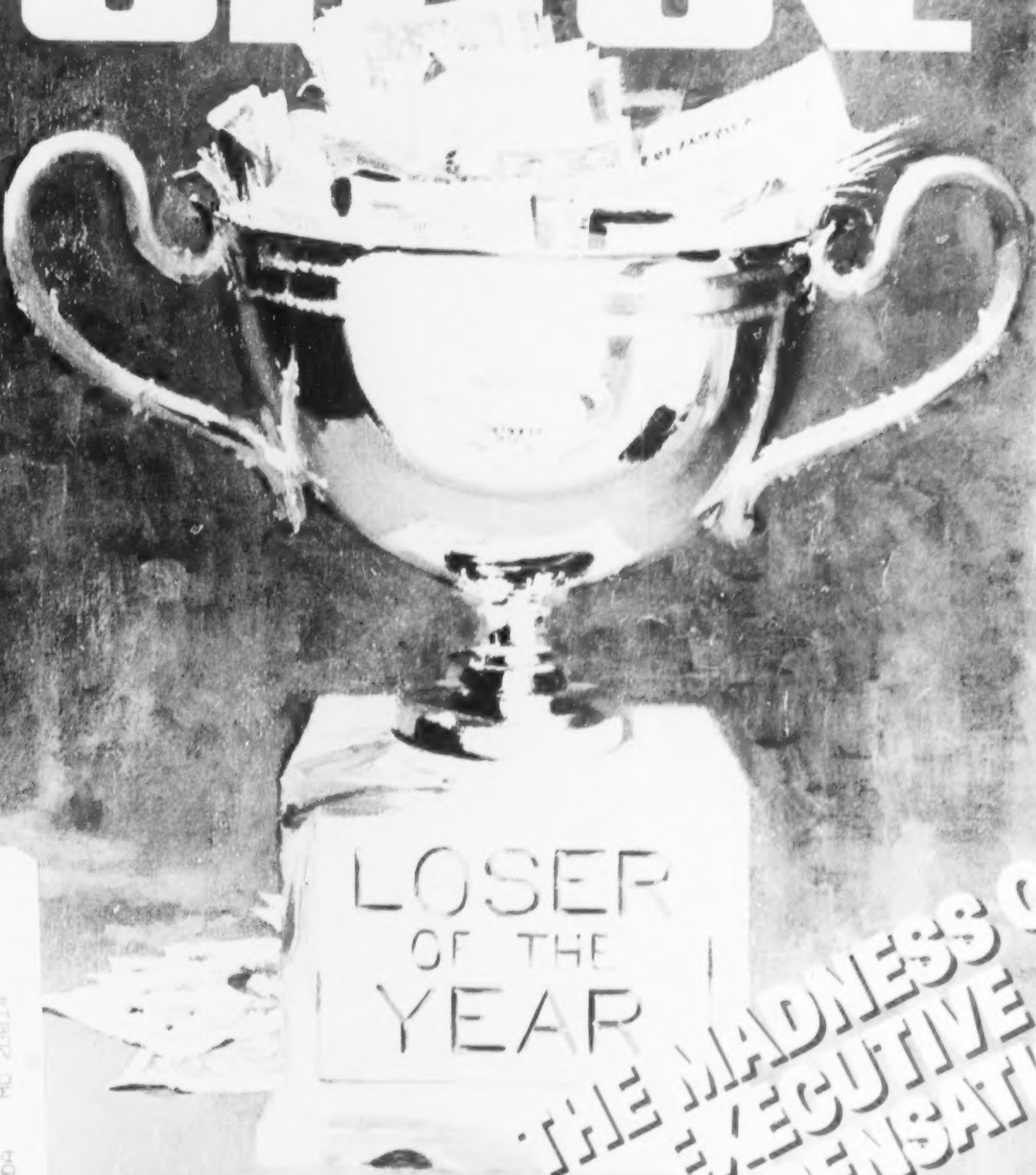

THE MADNESS OF EXECUTIVE COMPENSATION

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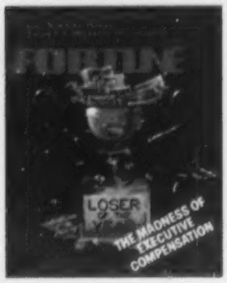
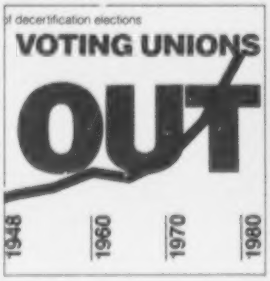


Milt Kobayashi's cover painting reflects the extraordinary extent to which top executives whose companies earn low returns still manage to earn high returns for themselves. The article begins on page 42.



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MANAGEMENT

The Madness of

by CAROL J. LOOMIS

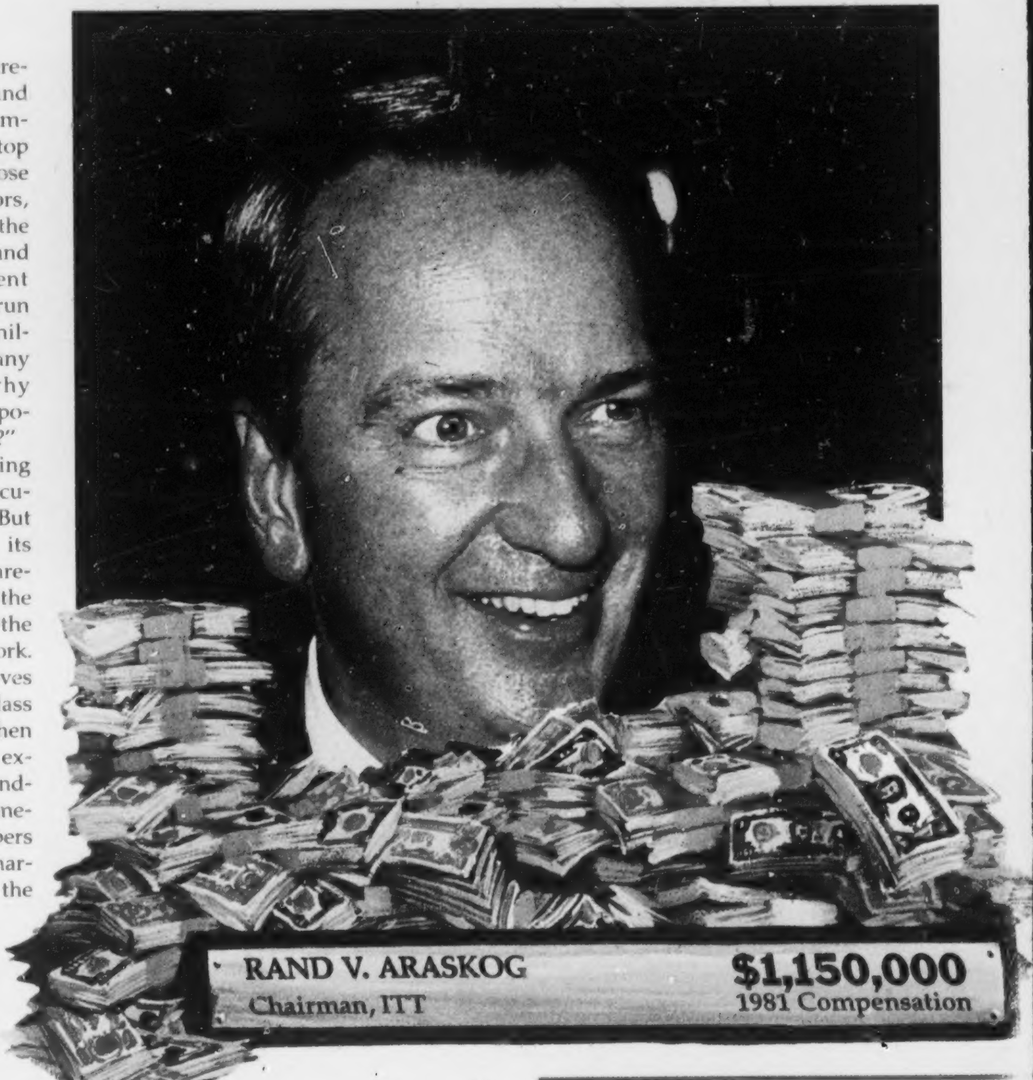
In the spring and early summer, the crescendo season for proxy statements and annual meetings, the chorus of hot complaints about the compensation paid top executives tends also to rise. From those linked to the system—corporate directors, consultants, executives themselves—the defenses shoot back. "These are big and complex organizations," the argument sometimes goes. "The people who run them *deserve* high pay. Look at the millions that Frank Sinatra gets, or Johnny Carson. Considering their pay, why should people get exercised about a corporate chief executive earning $1 million?"

In truth, there seems no way of judging whether the compensation of chief executives in general is too high or too low. But the Sinatra and Carson analogy has its weaknesses. As performers, they are unremittingly on test in a free market. In the upper reaches of corporate America, the market frequently does not seem to work. In a totally rational world, top executives would get paid handsomely for first-class performance, and would lose out when they flopped. But to an extraordinary extent, those who flop still get paid handsomely. In this regard, they have something in common with union members who are able to extract higher-than-market wages from their employers (see the article on page 54).

If directors behaved responsibly, they would handle the stockholders' money as if it were their own, avoiding compensation excesses. So many examples of near-unarguable excess exist that a lot of directors must be thought guilty of falling down on the job, perhaps in part because they are often themselves corporate executives and therefore beneficiaries of the system.

The madness of that system can be seen in an analysis of pay vs. performance. For this article and a portfolio of charts that follows, FORTUNE studied 140 large companies, comparing last year's return on stockholders' equity for each with the compensation paid its chief executive. Long-term forms of compensation—stock options and multiyear incentive plans—were excluded because the future payoffs on current plans are uncertain and payoffs already realized cannot logically be tied to a single year. The charts provide a perspective on pay and performance that a list cannot. They show some examples of consistency in which pay and performance match. They

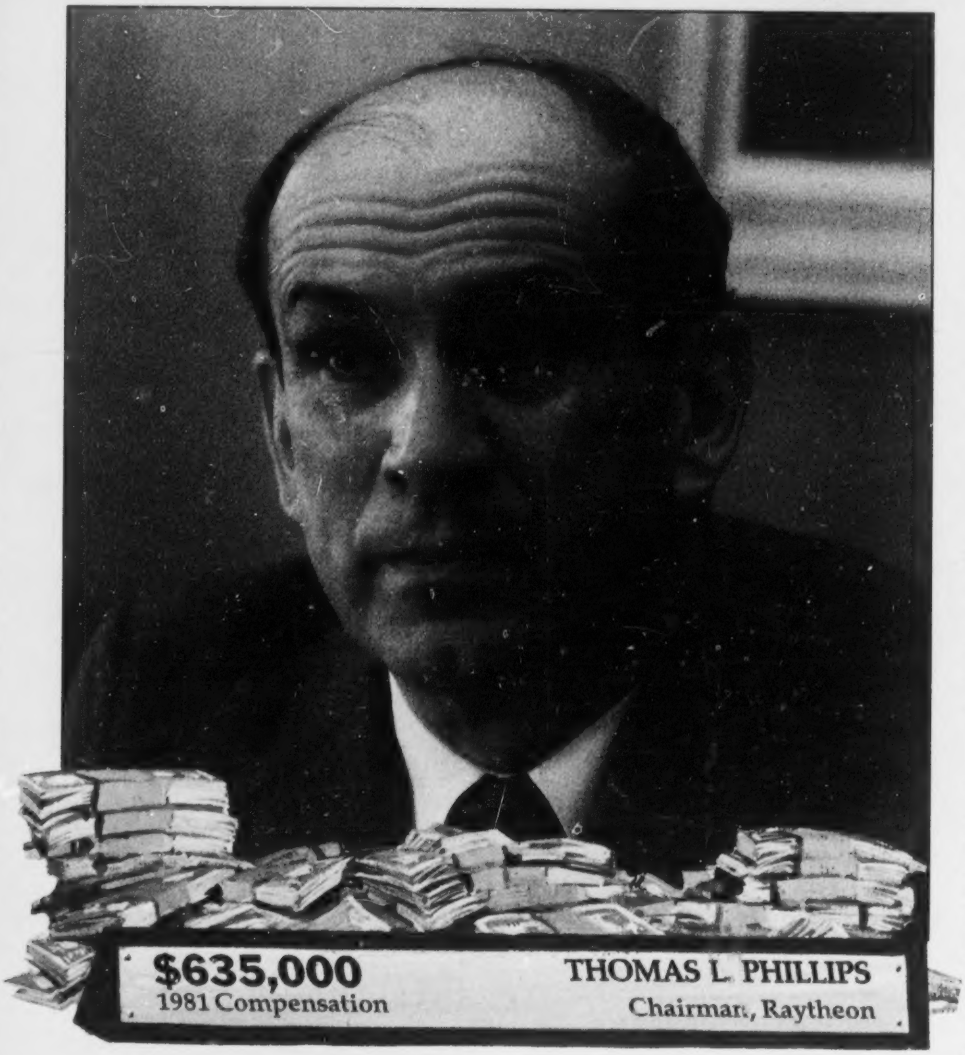
Research associate: Edward C. Baig



COMPANY'S RECORD OVER FIVE YEARS ENDING WITH '81	ITT
Average return on stockholders' equity	11%
Annual growth rate in earnings per share	3.5%
Change in price of common stock	−12%

Illustration by Milt Kobayashi

Executive Compensation



RAYTHEON

20.7%

24.1%

+147%

In the compensation of chief executives, any similarity between rewards received and performance demonstrated often seems almost coincidental. Judging by corporate results, it's hard to see why Rand Araskog, for instance, deserves so much more cash than Thomas Phillips.

show many more examples of irrationality and contradiction.

One of the contradictions is illuminated above, in the comparison of Thomas L. Phillips, chairman of Raytheon, and Rand V. Araskog, chairman of ITT. The $635,000 that Phillips made in 1981 is a long way from food stamps. In the firmament of conglomerates, however, where both companies reside, that pay puts Phillips in the underclass. Yet Raytheon's performance in recent years has been superb.

In contrast, ITT's performance has been dismal—and for his 1981 work Araskog got $1,150,000, which is $133,000 more than he made in 1980. His 1981 compensation includes $173,000 that ITT pays in carrying costs on a Manhattan cooperative apartment that Araskog bought so he could live close to the company's Manhattan headquarters. It also includes another unusual item. Almost all large companies pay fees to their outside directors, but almost none pay board fees to insiders, since they are already getting full-time compensation for their work. ITT *does* pay its inside directors. In 1981 Araskog and every other director got $1,000 for every board meeting attended (12 were held) and $750 for every committee meeting. The ITT proxy statement does not specify what part of Araskog's $1,150,000 came from board service. But if he achieved perfect attendance at all his board and committee meetings (which he might well have done, living close), he adjourned the year with $52,500 in fees.

Bonuses delayed

The compensation arrangements at one other conglomerate deserve a little light. Among the 20 largest multi-industry companies (charted on page 47), the company paying its chief executive the most in 1981 was W.R. Grace. The man who got the money was definitely J. Peter Grace, 69, grandson of the founder. How much he got is less definite: it was at least $1,549,000, but that does not include a bonus for 1981 that Grace is to get, but whose size, according to a proxy footnote, had not yet been determined.

This practice of stuttering to a conclusion about bonuses—and of not saying until the *next year's* proxy statement what they were—is also followed at Gulf & Western, Litton, IBM, Standard of California, Standard of Indiana, and Continental Illinois. Whatever the purpose of the delay, it manages to frustrate full disclosure. A stockholder in one of these companies is always getting stale bonus data and never manages to see, in one proxy, what an executive has been paid for a given year.

Going by past relationships between his salary and bonus and by W.R. Grace's 1981 profits (they were up from 1980), we estimate that Peter Grace got a bonus for 1981 of $265,000. That would push his compensation up to $1,814,000. The striking thing about this total is that it includes still another bonus—a splendid $1 million awarded to Peter Grace by the directors "in recognition of his accomplishments during his 36-year tenure as the company's chief executive."

Presumably that means "accomplishments" benefiting the shareholders, so FORTUNE measured these. From the end of 1945, the year Peter Grace took over, through 1981, Grace stock rose at an annual rate, compounded, of only 2.7%. In addition, Value Line statistics show that Grace stockholders earned an average annual dividend yield over the period of 4.7%, which combined with the appreciation gave the stockholders an annual return of 7.4%. That is distinctly low grade. According to data compiled by Roger G. Ibbotson and Rex A. Sinquefield, the stocks making up Standard & Poor's composite stock index did substantially better over the period, averaging 10.3%. One can only imagine how much more the directors might have awarded Peter Grace had he succeeded in making W.R. Grace just average.

The golden years

Peter Grace's compensation, according to a crisp couple of sentences in the proxy, has one more wrinkle. When he reached retirement age four years ago, Grace was "deemed," so says the proxy statement, to have retired—even though he kept slogging away as chief executive, just as he had since 1945. For a man who likes to work, which Peter obviously does, this state of grace is not bad: having been deemed, he began drawing his pension, which last year amounted to $350,000. Since a pension is basically a long-term reward, FORTUNE has not included it as compensation in the chart. Had it been included, his total for 1981 would have been $2,164,000.

A pension of $350,000, while noteworthy in this case because it is being paid to a working, lavishly compensated executive, is nothing extraordinary as chief executives' pensions go these days. The mind-boggling numbers arise in the oil industry, which is applying generous retirement formulas to very rich salaries and bonuses—running, for chief executives of the giants, near or above $1 million. Texaco is an especially munificent pension payer.

A well-paid Texaco executive who has spent 44 years with the company gets an annual pension when he retires almost exactly equal to his final average salary. In three years Texaco Chairman John K. McKinley, now 62, will be a 44-year man. He made $530,000 in salary last year (plus bonuses and other compensation that lifted him over $1 million); he will almost certainly get raises in the next few years, and can therefore expect to retire at 65 with an annual pension of $600,000 or more.

That's not all. A few years ago the Texaco stockholders, most of whom cannot have understood well what they were doing, approved a supplemental pension plan that gives certain key executives additional benefits. Their size will be influenced by the level of interest rates. Assuming, however, that rates at McKinley's retirement are what they are now, he will get, for ten years, an annual payment of $468,000. So his total annual pension in those ten years would exceed $1 million. The final salient fact: among large oil companies Texaco's performance has in the last decade been lousy.

If performance doesn't determine pay, what does? For one thing, size. Walton R. Winder, a Towers Perrin Forster & Crosby compensation consultant, says the firm's studies show that the correlation between size and pay, though by no means perfect, is relatively high, and superior to any other single pay correlation tested. Performance, he says, correlates weakly with pay. Another consultant, Louis J. Brindisi Jr. of Booz Allen & Hamilton, says it correlates not at all.

The phenomenon of increased pay for increased size is easiest to see when two companies merge. In 1979 Dart Industries paid its chief executive, Justin Dart, about $500,000 and Kraft paid its boss, John Richman (who was promoted into the job in midyear) $460,000. In 1980, the year Dart & Kraft was formed, Richman, who became C.E.O., leaped to almost $700,000, and last year he was up to $750,000.

A big question is whether increased pay for increased size (and the complexity that usually goes with it) is logical. Many compensation experts argue that it is, on the ground that the C.E.O. of an enlarged company is making decisions that affect more assets and more employees. The argument has a certain persuasiveness to it. But it also suggests that the directors' tolerance of poor performance should be lower in a large company than in a small company, and directors seldom seem gripped by that thought.

Flyspeck pay

Indeed, the unhappy fact is that the mergers that "justify" higher pay often lead to reduced returns for the shareholders. ITT is probably too complex for its own good. Right now, Dart & Kraft is a question. Brindisi, who has advised the company on compensation plans, thinks the merger "brilliant," since it links a cash cow, Kraft, with a cash sponge, Dart, which always seems to be needing money to finance growth. But last year Dart & Kraft, taking a major loss on a sale of assets, did not look too brilliant: its return on equity was only 12.8%, well below the returns that both Dart and Kraft were earning before the merger.

The immense profits that oil companies have earned in recent years are sometimes advanced as a reason why the pay of oil C.E.O.s should have risen. Here is what one director of a very major oil company says: "First of all, the industry is not labor-intensive. That means an oil company makes profits per employee that are huge, so it can afford to be more generous than can companies with more people. Also, if you end up the C.E.O. of one of the five or six most profitable companies around, you *should* get paid a lot. For a company that makes a couple of billion dollars, a $1-mil-

WHAT'S HAPPENED TO EXECUTIVE COMPENSATION . . .

1971			1981		
INDUSTRY	**LARGEST COMPANY**	**CHIEF EXECUTIVE'S COMPENSATION**	**LARGEST COMPANY**	**CHIEF EXECUTIVE'S COMPENSATION**	**INCREASE (DECREASE)**
AEROSPACE	BOEING	$80,000	BOEING	$957,551	1,096.9%
FOOD	SWIFT	$68,053	DART & KRAFT	$748,647	1,000.1%
PHARMACEUTICALS	AMERICAN HOME PRODUCTS	$240,000	JOHNSON & JOHNSON	$968,542	303.6%
PUBLISHING	TIME INC.	$203,025	TIME INC.	$633,367	212.0%
METAL MANUFACTURING	U.S. STEEL	$300,000	U.S. STEEL	$821,322	173.8%
RETAILING	SEARS ROEBUCK	$386,800	SEARS ROEBUCK	$1,010,137	161.2%
UTILITY	AT&T	$360,500	AT&T	$894,400	148.1%
OFFICE EQUIPMENT	IBM	$394,331	IBM	$940,000	138.4%
COMMERCIAL BANKING	BANKAMERICA	$171,543	BANKAMERICA	$390,325	127.5%
PETROLEUM REFINING	STANDARD OIL (N.J.)	$505,100	EXXON	$1,105,412	118.9%
BROKERAGE	MERRILL LYNCH	$296,501	MERRILL LYNCH	$642,524	116.7%
ADVERTISING	J. WALTER THOMPSON	$191,587	JWT GROUP	$372,881	94.6%
MUTUAL LIFE INSURANCE	PRUDENTIAL	$300,000	PRUDENTIAL	$582,744	94.2%
CONGLOMERATES	GENERAL ELECTRIC	$500,000	GENERAL ELECTRIC	$853,976	70.8%
AUTOMOTIVE	GENERAL MOTORS	$838,750	GENERAL MOTORS	$489,250	(41.7%)

. . . AS COMPARED WITH

	COMPENSATION		**COMPENSATION**	**INCREASE**
MAJOR-LEAGUE BASEBALL PLAYER (average)	$31,543		$196,500	523.0%
STARTING LAWYER IN A WALL STREET LAW FIRM	$15,500		$43,300	179.4%
HARVARD MBA GRADUATE ENTERING CONSULTING (median)	$18,000 (1972 data)		$46,100	156.1%
AUTO WORKER (average hourly wage)	$4.72		$11.01	133.3%
AIRLINE PILOT (average for union members)	$28,390		$60,280 (1980 data)	112.3%
PRESIDENT OF AFL-CIO	$70,000		$110,000	57.1%
U.S. SENATOR	$42,500		$60,663	42.7%
PRESIDENT OF THE U.S.	$200,000		$200,000	0.0%
CONSUMER PRICE INDEX (1967=100)	121.3		272.4	124.6%
MINIMUM WAGE	$1.60		$3.35	109.4%
STANDARD & POOR'S 500 STOCK INDEX (year-end)	102.09		122.55	20.0%

A mere decade ago the chief executives of some major corporations were getting under $100,000. In general, they and the other corporate officers listed did nicely over the period in comparison with such indicators as the CPI. The proxy rules in 1971 were different from those now in force, but not by enough to distort the data.

lion paycheck is only a flyspeck."

One flaw in that case is that OPEC, not the oil-company chief executives, provided the main boost to profits. Another flaw is that a $5-million paycheck could also be construed a flyspeck. Would it, therefore, be appropriate for an oil company to be paying its boss $5 million today?

The oblique answer is that no major oil company would today pay that much because no other major oil company does. Compensation committees spend enormous amounts of time checking what peer companies pay, so that the committees can satisfy themselves they are not getting grossly out of line. "Directors," says consultant Peter T. Chingos of Peat Marwick Mitchell, "are almost paranoid on this subject. They know there have been a few suits that have attacked the directors for paying too much"—some have befallen Norton Simon and International Harvester—"and they know the press likes to write about who's getting the most money. No director wants to be the one paying the most."

But most directors on compensation committees probably also have an urge to be agreeable about questions of pay. It is widely believed that many compensation committees are rubber stamps, unwilling to be hard-nosed about the pay of top executives, particularly those chaps who are fellow members of the board. Any reader of this article can imagine what his own attitude would be if he were required to sit in semi-public judgment on the salaries of his peers, some of whom were good friends. He would likely avoid harsh judgments and, in the end, be generous to a fault, particularly if he had the privilege of using money not his own.

An oft-expressed view about compensation consultants, meanwhile, is that they are tools of management. Just about any other kind of consultant is called in to cut costs; compensation consultants are normally called in because management believes it is not paying itself, or those below, enough and is looking for an expert to validate that opinion. Graef S. Crystal, a widely respected Towers Perrin consultant, says cheerfully, "There is a fine line between a compensation consultant and a whore." He volunteered this extreme characterization in recalling a couple of instances in which he resigned from accounts because he could not tolerate the greed—his term is "the porcine compensation characteristics"—of the chief executives involved.

In the last few years a primary purpose for which consultants have been hired is to construct long-term incentive plans, which cover perhaps three to five years. The long-term plans are extraordinarily varied, but might pay off, for example, if certain return-on-equity or earnings-per-share goals are met, or if a company gains ground against a specified group of competitors. Since those seem decent ambitions, this trend has admirers. Chingos of Peat Marwick applauds managements for beginning to think about "compensation strategy." Robert C. Ochsner, a specialist in the oil and chemical industries at Hay Associates, says he's seeing "five times more interest in pay-for-performance than I've ever seen before." On the other hand, Crystal of Towers Perrin, who has about 30 large companies as clients, says he finds that management's enthusiasm for being tested by fire has its limits: "Most managements have little appetite for establishing really gutty targets."

Creative use of the carry-over

A lot of evidence on that side exists in the fine print of proxy statements, which are replete with details—sometimes nearly indecipherable—of both long- and short-term incentive plans. These plans typically hint that they are rigorous, then promptly reveal themselves to be squishy. Intimations of rigor often arise from "shareholder protection formulas" that establish rules about the funding of bonus pools. Proof of squishiness is derived from an examination of the formulas, which are often wildly anachronistic, providing about as much shareholder protection as a catcher's mask made of gauze. For example, NCR's proxy indicates that it cannot pay a bonus unless return on equity is at least 6%. That is less than half the FORTUNE 500's median last year and five percentage points below the worst return that NCR has earned in the last five years.

Directors often compensate for the flabbiness of the shareholder-protection formulas by paying out only part of the bonus pool. But that can be a mixed blessing, since at some companies (Burroughs, Westinghouse, RCA), the unused portion of the pool can be carried forward from one year to the next, to be dipped into even if the reasons for awarding bonuses then seem dubious.

In conditions of total trouble—first, profits too small to fund a bonus pool, and second, an absence of carry-overs—a company can always put in new, liberalized rules so that it can keep on paying bonuses. General Motors did that this year, though it was prevented from immediately applying the new rules by a fire storm of protest from union members who had taken cuts in pay. The country's two biggest bank-holding companies, BankAmerica and Citicorp, have both recently weakened their rules. Its change, said BankAmerica, was aimed at making its plan "more competitive." The new system squishily calls for participants to achieve "individual objectives," although—super-squish—"such achievement is not a prerequisite for making awards." The change tips the truth about bonuses: they are much less a reward for performance these days than an institutionalized variety of salary.

A few companies have bonus thresholds that are truly tough—Wang Laboratories uses 15% return on equity and adds a few impediments beyond that. Some of the new long-term plans also incorporate real suspense, by setting up a range of goals and providing for variable payoffs depending on results. H.J. Heinz has installed a three-year plan heavy in incentives. The plan will pay nothing for annual earnings-per-share growth below 7%, and at the other extreme, practically deliver the world for 18% growth combined with a 50% rise in the P/E. If Anthony J. F. O'Reilly, the company's C.E.O., manages to make that maximum target, which would imply a big rise in Heinz stock, he could end up one of the best-paid executives around. His stockholders shouldn't mind a bit.

Then again, Sears Roebuck shareholders may be jolted by one provision of that company's new long-term plan, just put in place. The provision says that Sears' return on equity will be measured over the next few years against that of a peer group of companies and that bonus awards will only begin to be paid (potentially rising from there in line with performance) if the company manages to rank "at or above the median of the bottom third of its peer group sample." The median of the bottom third? The 17th percentile? That's an objective whose attainment is to be rewarded? "Given where they are now," lamely says one man familiar with the plan, "that's not an immodest goal."

What shareholders can do

In the end the long-term plans must probably be viewed for what they are—an addendum, another layer on top of salary, short-term bonus, stock options, stock appreciation rights, and cooperative-apartment carrying costs. In addition, since they are not attachable to a single year, the long-term plans float ephemerally through the pages of proxy statements. Trying to discover what an executive has reaped from such a plan, a shareholder is apt to get lost in a forest of verbiage.

The irrationalities and excesses of executive compensation do not seem easy to eradicate. It is hard to imagine uprisings by stockholders, who are seldom driven to vote down management proposals of any kind, much less those that glaze the eyes with their complexity. Stockholders who do perceive that they are being fleeced by management are often much more likely to sell than fight. That may be the simple solution, but it does not do much to cure the deficiencies of a system.

Any stockholder wanting to do his bit might consider asking a few pointed questions of compensation-committee directors at annual meetings. A lot are plainly uneasy about their position and some may even be looking for the ammunition a question could provide. Said a member of a compensation committee recently, when asked by a FORTUNE reporter to comment on an egregious compensation arrangement: "I hope that you will talk about that in your article. That could help me to do what I need to." Good luck.

Pay vs. Performance in Ten Industries

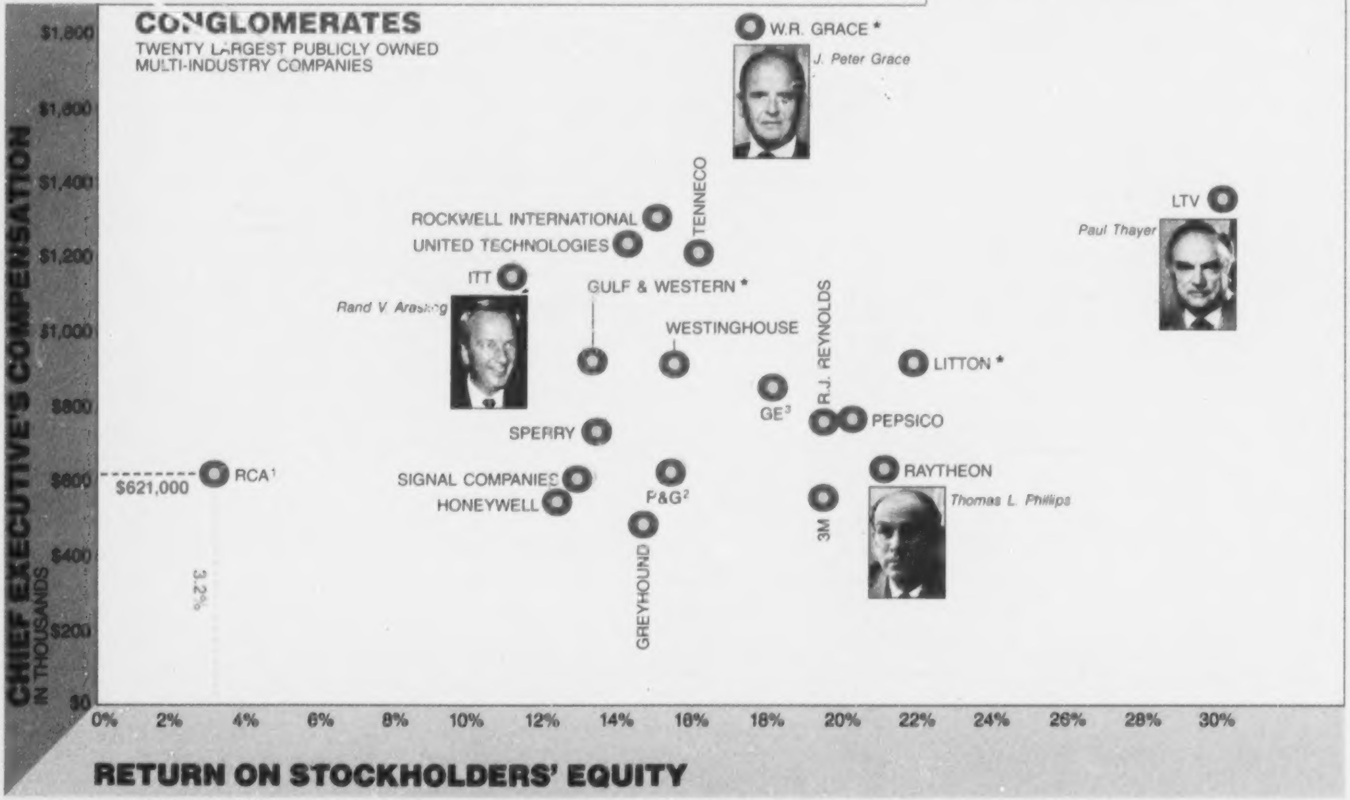
Most listings of compensation paid top executives don't tell you how it stacks up against performance. On these pages, FORTUNE *presents "scatter plot" charts that compare pay with performance for 140 companies in ten large industries. The grouping by industry allows the performance and pay policies of similar companies to be compared. Compensation among industries ranges widely, from a median of $1,030,781 last year for C.E.O.s of the ten largest conglomerates to $504,480 for the ten top retailers.*

The performance indicator we've used is each company's 1981 return on shareholders' equity, a ratio that shows how productively management is investing the shareholders' money. A one-year return is not a perfect indicator. But the returns of most companies charted do not swing violently; those that do tend to move with others in the same industry. Using an average of returns over several years would distort the standing of companies that had improved or lost ground.

On each chart the horizontal axis measures a company's 1981 return. The vertical axis shows the 1981 compensation of the chief executive. The dotted lines on the chart below are illustrative. RCA's return on equity was 3.2%; the C.E.O.'s compensation, $621,000. As the footnote points out, RCA is a special case: the money went to a half-year C.E.O. An explanation of how the compensation figures were derived is on page 52.

In general, a plot point in the lower left-hand corner of a chart denotes poor performance punished by poor pay. A position at the upper right shows fine performance rewarded by fine pay. Taken together, the charts support the notion that pay and performance are poorly correlated.

Here's how the FORTUNE 500's largest conglomerates performed last year and how their chief executives were rewarded. For the chart, a conglomerate is defined as a company that describes itself in its annual report as pursuing at least four lines of business, none accounting for as much as half its revenues (with non-consolidated financial businesses included). Grace of **W.R. Grace**, buoyed by a $1-million special bonus, got the highest compensation of any C.E.O. on this chart and those that follow. **LTV**'s return on equity tends to be volatile, but in 1981 reached its highest point in seven years. Thayer's compensation reached an all-time peak, rising to $1,364,000 from $858,000 in 1980. **ITT** and **Raytheon** are the odd couple spotlighted on pages 42 and 43.

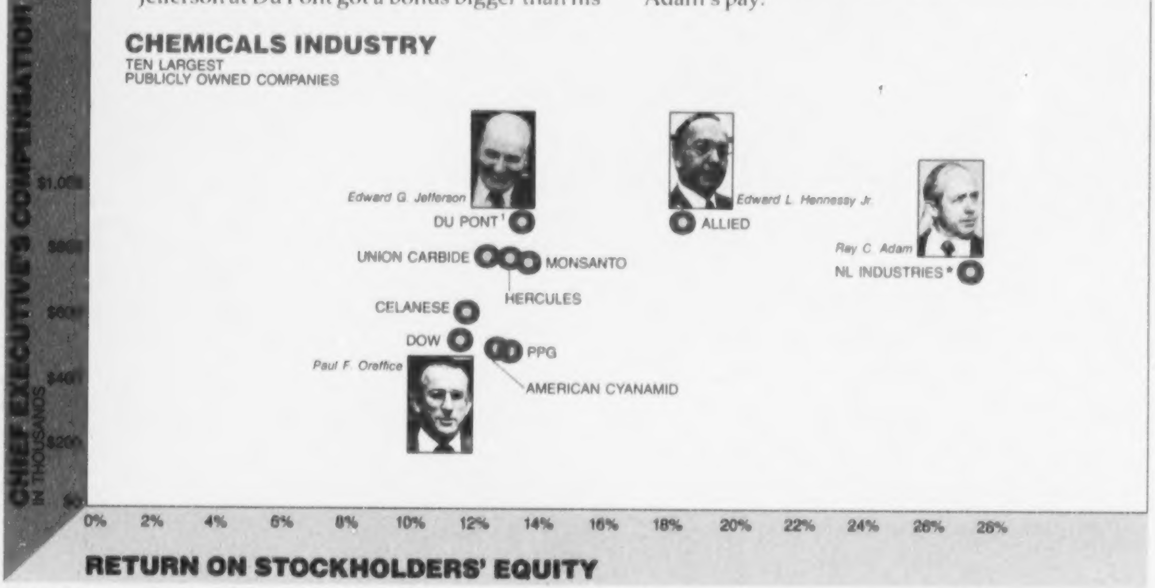


1 Earned by Thornton F. Bradshaw as an outside director for six months, chairman and chief executive for six. 2 Earned by John G. Smale as president for six months, president and chief executive for six.
3 Earned by John F. Welch Jr. as vice chairman for three months, chairman and chief executive for nine. ★ The compensation figure includes a FORTUNE estimate of a 1981 bonus whose size has not been announced.

The chemicals industry, according to consultant Robert C. Ochsner of Hay Associates, used to pay in line with the oil industry, but has now been outstripped. Last year, the chief executives of these ten chemical companies got median pay of $752,000, compared with a median of $896,000 for the ten largest companies on the petroleum-refining chart opposite. The two biggest chemical companies, **Du Pont** and **Dow**, both had mediocre returns on equity in 1981 but paid quite differently: Oreffice's compensation from Dow did not include a bonus because the company missed earnings goals; by contrast, Jefferson at Du Pont got a bonus bigger than his salary. Since Hennessy arrived at **Allied** in 1979 (coming from United Technologies), he has raised the company's return on equity by several percentage points from the old norms. Right now he has at the ready a "golden parachute"—a contract provision that guarantees him special payments if Allied is taken over and he loses his job or resigns. Hennessy's parachute would ease him down with five years of severance pay, each year's equal to his highest year's compensation on the job. **NL Industries**' chemical products include drilling fluids for the oil industry. The company's return on equity has risen sharply in the last few years and so has Adam's pay.

CHEMICALS INDUSTRY

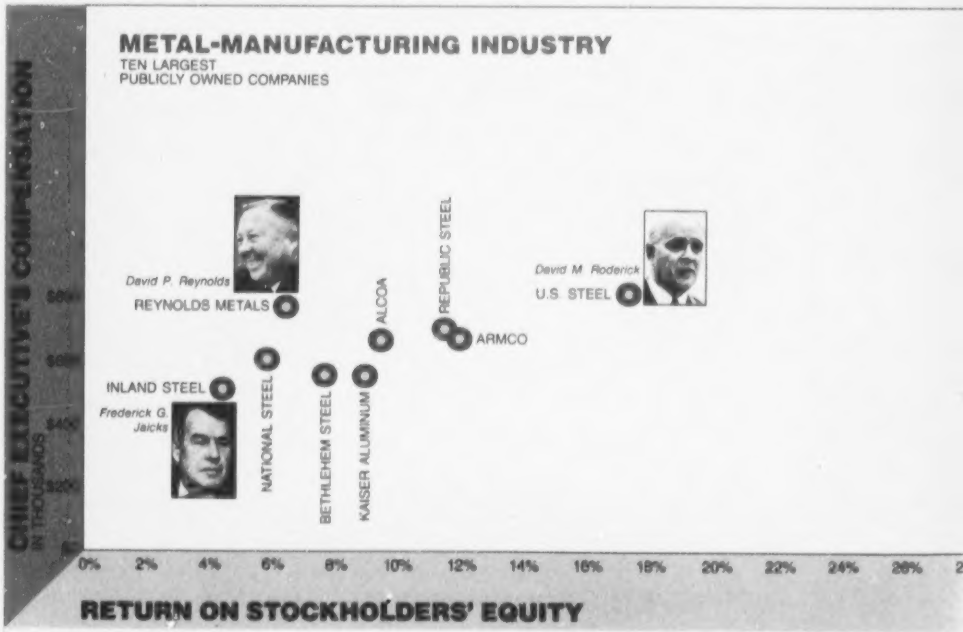
TEN LARGEST
PUBLICLY OWNED COMPANIES



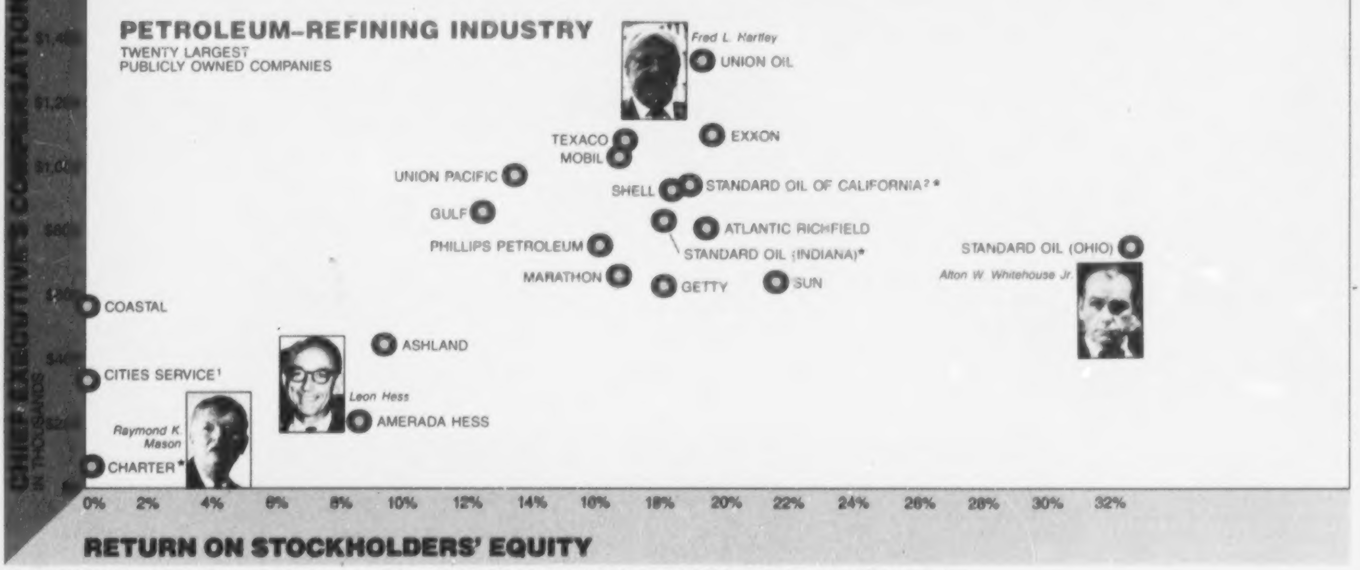
[1] Earned by Jefferson as president for four months, chairman and chief executive for eight. * The compensation figure includes a FORTUNE estimate of a 1981 bonus whose size has not been announced.

METAL-MANUFACTURING INDUSTRY

TEN LARGEST
PUBLICLY OWNED COMPANIES

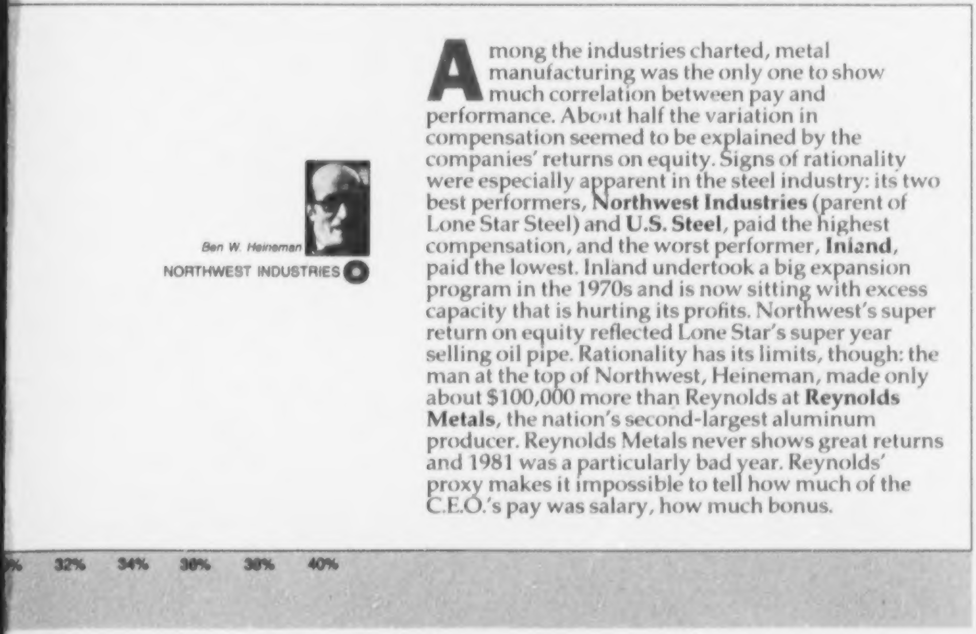


Last year's big payer in this big-paying industry was **Union Oil of California**, the 14th-largest company, whose chairman, Hartley, got $1,331,000. Almost $800,000 of that was incentive pay,, at least some of it rewarding his feat of raising Union's return on equity over the last few years from below the median for its peers to well above. Clifton C. Garvin Jr., the top man at **Exxon**, the largest company in the industry, ranked No. 2 in compensation. Exxon's compensation has grown relatively slowly (see table, page 45), suggesting that the company has deliberately held back, trying to avoid public flak. But Exxon uses a type of intermediate-term incentive plan that almost guarantees extra rewards. The 1981 plan provides that when Exxon's cumulative earnings per share add up to $12.50 (that might take about two years from the starting date) executives will receive payments equal to $12.50 times the number of "bonus units" they hold. Garvin's payment will be $325,000. **Sohio's** gamble on Alaskan oil paid off grandly, but Whitehouse's compensation remained middle-of-the-pack. Hess of **Amerada Hess**, who controls 16% of the company's stock, regularly pays himself only $200,000; the No. 2 man got more than $700,000 last year. Apparently chagrined by **Charter's** minuscule profits, Mason, who owns 12% of the stock, paid himself only $1 in 1981; the rest of the compensation shown represents FORTUNE's estimate of the "personal benefits" he got. In 1980 Mason's compensation was $309,000. Companies that lost money are plotted as earning zero return.

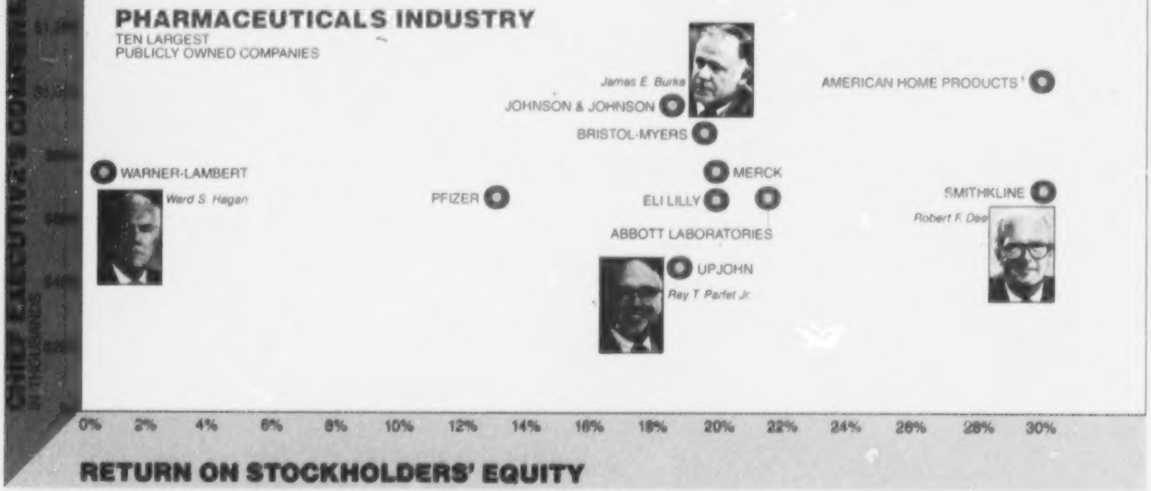


1 Earned by Charles J. Waldelich as president for four months, president and chief executive for eight. 2 Earned by George M. Keller as vice chairman for four months, chairman and chief executive for eight.
★ The compensation figure includes a FORTUNE estimate of a 1981 bonus whose size has not been announced.

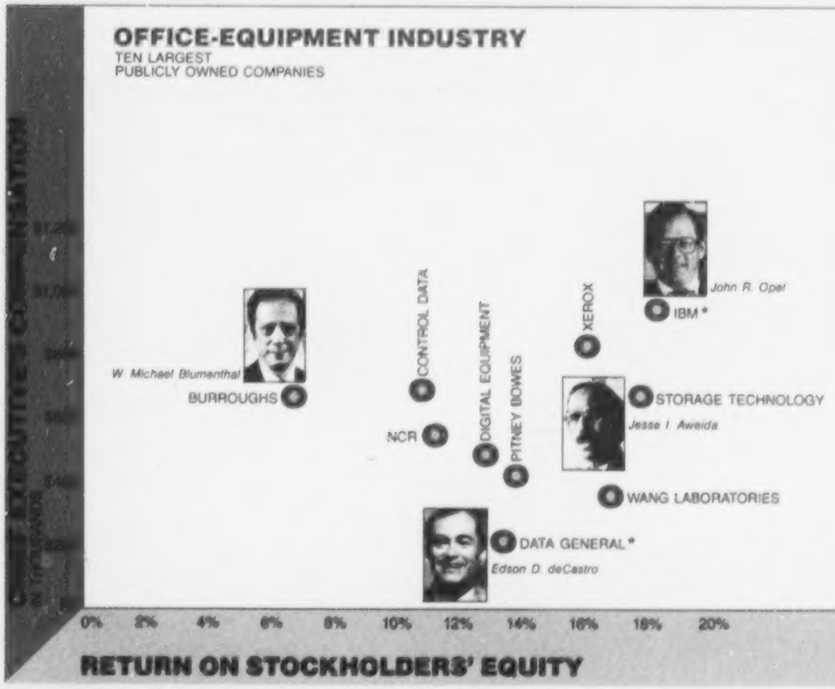
Among the industries charted, metal manufacturing was the only one to show much correlation between pay and performance. About half the variation in compensation seemed to be explained by the companies' returns on equity. Signs of rationality were especially apparent in the steel industry: its two best performers, **Northwest Industries** (parent of Lone Star Steel) and **U.S. Steel**, paid the highest compensation, and the worst performer, **Inland**, paid the lowest. Inland undertook a big expansion program in the 1970s and is now sitting with excess capacity that is hurting its profits. Northwest's super return on equity reflected Lone Star's super year selling oil pipe. Rationality has its limits, though: the man at the top of Northwest, Heineman, made only about $100,000 more than Reynolds at **Reynolds Metals**, the nation's second-largest aluminum producer. Reynolds Metals never shows great returns and 1981 was a particularly bad year. Reynolds' proxy makes it impossible to tell how much of the C.E.O.'s pay was salary, how much bonus.



Notable contrast can be seen between **Johnson & Johnson** and **Upjohn**. Both had about the same return on equity in 1981, and in recent years Upjohn has usually been the better performer of the two. Yet Burke of J&J gets more than double the compensation of Parfet at Upjohn. Part of the disparity is no doubt explained by size: J&J is the largest company on the chart, Upjohn the smallest. **SmithKline**'s enormous success with the ulcer drug Tagarnet has swelled its profits. Dee's compensation, however, has not moved into the upper reaches. **Warner-Lambert**'s return on equity is almost off the chart on the low side because the company was restructuring last year and took large losses on divestitures and phased-out product lines. By the rules in existence then, its low profits would have precluded bonuses. But this year the company got shareholders to agree that, in determining bonuses, unusual losses such as write-offs won't count in the profit calculation—and with that change, 1981 bonuses were retroactively paid. **Eli Lilly** has one of the oddest bonus deals around: its chief executive, Richard D. Wood, got .00535% of 1981 sales and .04305% of profits, with the two results averaged, as his bonus. By FORTUNE's calculation, that worked out to $155,000 (which is included in the Lilly compensation figure on the chart).

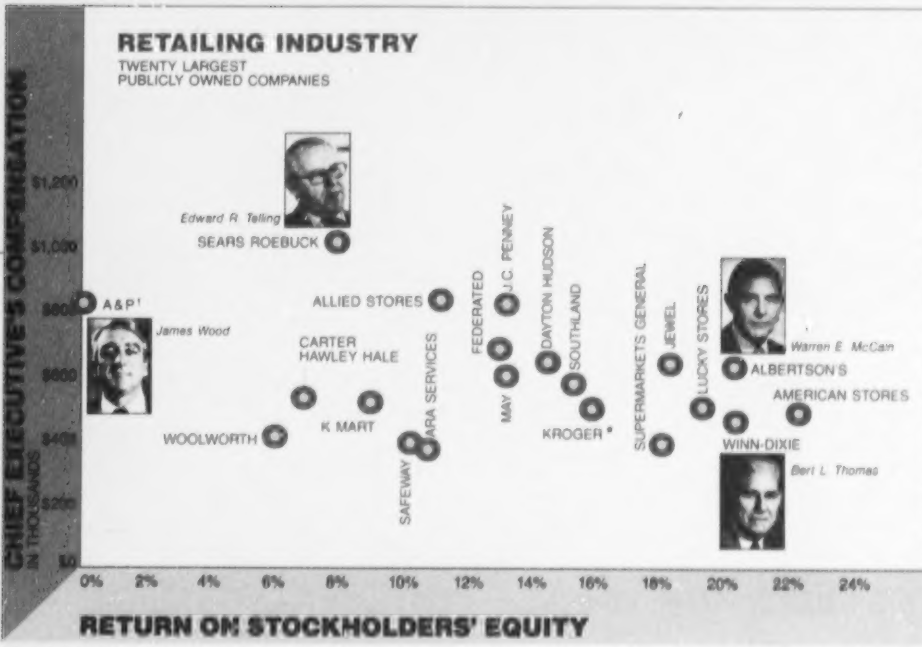


† Earned by John W. Culligan as president for four months, chairman and chief executive for eight.



* The compensation figure includes a FORTUNE estimate of a 1981 bonus whose size has not been announced.

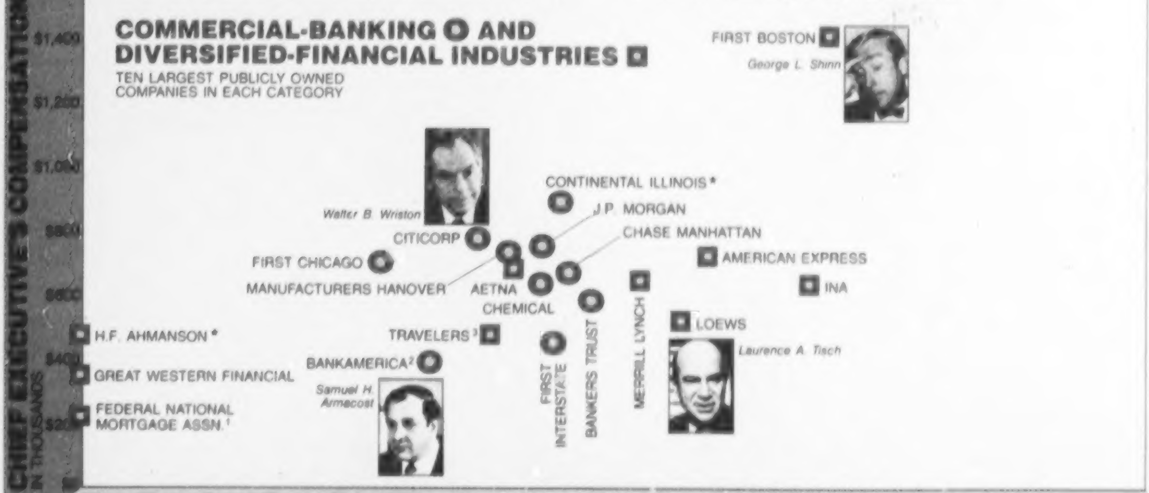
Smaller companies in office equipment tend to lean heavily on stock options as a form of compensation. DeCastro at **Data General** got only $204,000 in 1981 compensation, but also got restricted options at prices well below market. As long-term compensation, the options are not included on the chart. DeCastro should hope he does as well as Aweida of **Storage Technology**, who in 1977 was granted the right to buy 200,000 shares for a total of $5,000 and who has gradually been getting these vested. In 1981 the vestings were worth $1,130,000 (not included on the chart). Storage Technology is unusual in not having any retirement plan—but Aweida can probably get along without one. In his two years at **Burroughs** (one as C.E.O.) Blumenthal has not managed to produce a return up to his compensation. **IBM**'s profits were down last year and FORTUNE estimates that Opel's bonus fell with them. (**Xerox**, though often considered a photographic company, is included here because it competes in office equipment.)



Extraordinary bonuses for C.E.O.s have been the vogue lately and Telling got one at **Sears Roebuck** (reportedly about $350,000) for his "significant contribution and leadership" in the company's acquisition of Dean Witter and Coldwell Banker. Perhaps they will help Sears' profits. Wood at **A&P**, who came from Grand Union, is the latest outsider to try to stem that company's losses. He got a bonus of $300,000 just for coming and will start getting annual bonuses if perceptible profits appear. The bonuses would range from $90,000 annually for $10 million in pretax profits, up to $1.2 million annually for $120 million. **Albertson's** has fine returns but pays relatively little. **Winn-Dixie** amazingly does not pay salaries to its executives, only bonuses. A Winn-Dixie spokesman says the formula is a "private matter."

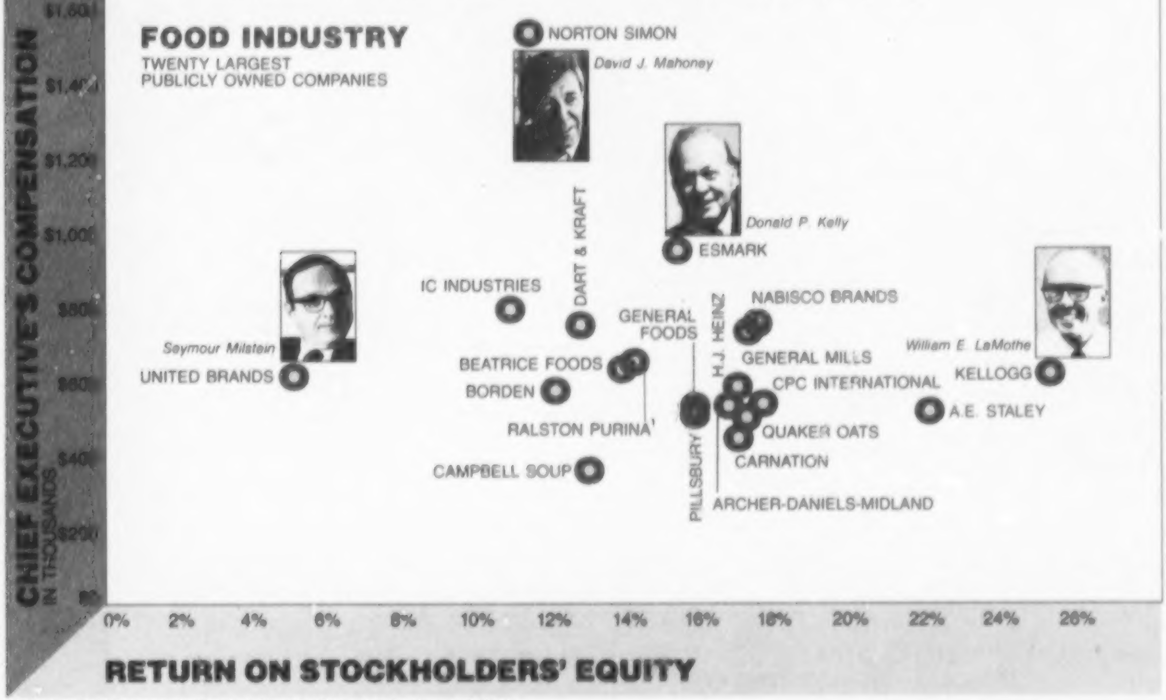
[1] Earned by Wood, who joined the company in the third month of its 1981 fiscal year as chairman and chief executive. * The compensation figure includes a FORTUNE estimate of a 1981 bonus whose size has not been announced.

Two industries are combined on this chart and, though similar, they display different pay and performance characteristics. Most of the banks are bunched in both return and compensation. **First Chicago** and **BankAmerica**, however, are in the doldrums area on returns, and BankAmerica is a laggard in pay (which helps explain why it recently liberalized its rules on the payment of bonuses). Wriston at **Citicorp** is often assigned the credit—or blame—for having pushed up bank pay scales. He began recruiting MBAs some years ago, at rich salaries, and other banks ultimately followed. Lately, the MBAs in Citicorp's consumer-banking business have not been able to keep it from hurting the company's return on equity. The diversified financial companies include several S&Ls in great trouble and not paying too much in compensation; they also include **First Boston**, recovered from trouble a few years ago and earning a handsome return. Shinn's pose in the photograph might suggest he is either trying to figure out how to invest his $1,410,000 in 1981 compensation or how to save all the souls below him. The board of directors at **Loews** has no compensation committee. Its functions, no doubt, are handled by Tisch and his brother, Preston Robert, who together own 42% of the common stock and last year decided to pay themselves around $520,000 each.



[1] Earned by David O. Maxwell, who joined the company in February 1981 as president, becoming chairman and chief executive in May 1981. [2] Earned by Armacost as vice chairman for four months, president and chief executive for eight.
[3] Earned by Edward H. Budd as president for three months, president and chief executive for nine. * The compensation figure includes a FORTUNE estimate of a 1981 bonus whose size has not been announced.

The performance statistics at **Norton Simon** do not account for Mahoney's 1981 compensation of $1,537,000. In the last ten years the company's return on equity has never exceeded 14.5% and last year it was down to 11.4%. A suit some years ago forced reductions in Mahoney's compensation, but he has rebounded sharply. His 1981 compensation included premiums of an undisclosed amount that the company paid on a $7-million insurance policy covering Mahoney's life and payable to his estate. An opposite to Mahoney is LaMothe at **Kellogg**, a company with an exceptional return but conservative instincts about pay (perhaps, says one consultant, because "it's located in Battle Creek"). It departed from the norm a bit in 1981, awarding LaMothe and other officers larger-than-usual bonuses because of the part they played in bringing Kellogg successfully through the FTC's "shared monopoly" case against the big cereal manufacturers. Though **Esmark**'s return on equity is no barn-burner, Kelly has significantly improved it by restructuring the company—and that helps explain his relatively high compensation. The management at **United Brands** is a brother act. Seymour and Paul Milstein and their families own about 14% of the company's common stock and draw compensation of $613,000 each, which seems fairly steep for a company that never seems to go anyplace. But United Brands has a major stockholder, American Financial, that may be a friendly kibitzer on the compensation question. Its boss, Carl H. Lindner, has always been a stalwart believer in high pay.



[1] Earned by R. Hal Dean as chairman and chief executive for nine months, chairman for three.

WHAT'S BEHIND THE COMPENSATION NUMBERS

The compensation figures in the preceding charts include salaries, bonuses, profit sharing, stock-purchase contributions made by a company for the chief executive's account, and 1981 compensation that is scheduled to be paid on a delayed basis. The delay may come because the recipient has elected to defer the income or because company rules, usually aimed at retaining the executive, prohibit immediate payment. In most cases, the compensation in storage draws interest or dividends, and 1981 income from that source is included in the charts. Also included are what the SEC calls "personal benefits." These are costs that a company assumes for the benefit of the executive, such as the expense of financial counseling services and the premiums on large life-insurance policies payable to the executive's estate.

The compensation numbers exclude long-term income of any kind—profits on stock options, rewards from long-term incentive plans. Future payoffs from these plans are unknowable and payoffs already realized cannot be related to a single year. In cases where a compensation figure includes a FORTUNE estimate of a 1981 bonus whose size has not been announced, the estimate was based on past compensation patterns, mathematical formulas included in proxy statements, and the company's profits—though that is a weak reed to lean on, since bonuses often bear little relation to profits.

The return-on-equity figures used are from the FORTUNE 500 and from lists of the largest non-industrial companies (which begin on page 130 of this issue). The percentages are derived from a company's profit for its 1981 fiscal year and its year-end stockholders' equity.

THE JOB MARKET

LAST OF A SERIES

Who Needs Unions?

A lot of economists argue that collective bargaining doesn't do what it's supposed to, and givebacks may be a sign that they're right.

by DANIEL SELIGMAN

What is one to make of organized labor's givebacks—of that avalanche of bargaining concessions at General Motors and Ford, in the steel industry, in rubber, farm equipment, trucking, construction, railroads, airlines, and newspaper publishing? The *purpose* of the givebacks is clear enough. They're intended to preserve some jobs and output that were, as the recession dragged on, looking highly endangered. But some other matters are not so clear.

Question: if we tell ourselves that this extraordinary display of collective-bargaining-in-reverse is preserving output and jobs, then shouldn't we also tell ourselves that *ordinary* union behavior destroys them? Related question: what is the economics profession telling us nowadays about the economic consequences of unionism? Further question: if unionism does have perverse effects, shouldn't we be reexamining a variety of public policies whose stated purpose is to bolster collective bargaining?

Organized labor is in terrible trouble and there is no compelling reason to think that its long downdrift is nearing an end. Its share of the work force is declining, as is its batting average in collective-bargaining elections. (See the charts on the following pages.) Its eternal efforts to "organize the unorganized" go on—the current Houston Project being the latest and largest such effort—but it is hard to envision the AFL-CIO suddenly getting hot in the Sunbelt. The reputation of unions is close to an all-time low. Reviewing a broad range of survey data, Seymour Martin Lipset and William Schneider reported in *Public Opinion* last summer that unions "are one of the least trusted institutions in American life," adding: "There is considerable evidence that labor stands lower in public regard than business, and in some cases it is held in even lower esteem than government or politics."

Higher fares for the poor

Even liberal intellectuals, who once viewed organized labor as a major force for social justice, today see unions principally as another special interest and one that, as often as not, works against the interests of the most disadvantaged Americans. Obvious example: the endless rounds of pay increases won by municipal transit workers since the Fifties, a period when service in most big cities deteriorated sharply while the fares paid by the working poor rose steadily. The Department of Transportation has published a study, prepared for it by the Institute of Public Administration, indicating that between 1950 and 1977 the wages of municipal transit workers rose by 70% and transit fares rose by 50%—both figures being adjusted for inflation. Federal aid to mass transit, still something of a sacred cow on the editorial pages, has gone largely to boost the pay of unionized transit workers, who now have compensation packages that seem absurdly high in relation to the skills involved; an average subway motorman in New York costs the city $28,000.

The suspicion that unionism is bad for employment and output has been reinforced by the lopsided shape of the current recession. By just about every measure, the recession has been worse in those sectors where unionism is strongest. The auto and steel industries are perhaps the most obvious cases in point. Yale Brozen, professor

Research associate: Craig C. Carter

MARCH
WITH THE
C.I.O.
TO
VICTORY

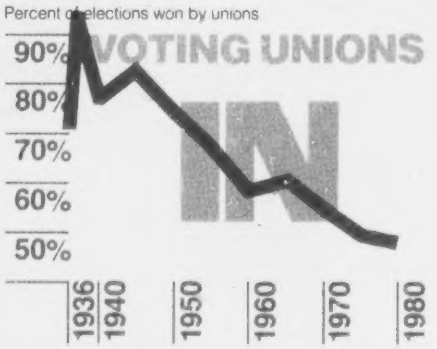
BUILD UNION
Lane Kirk

Herman Kokojan

From Big Victories to Beating the Bushes

Union membership soared following the Supreme Court's 1937 Jones & Laughlin decision, which upheld the Wagner Act and set off a tidal wave of unionism at J&L (above) and thousands of other companies. With the tide now moving the other way, organized labor is gamely seeking members in the overwhelmingly non-union Sunbelt. At right, AFL-CIO President Lane Kirkland autographs a hard hat during a visit to help promote the Houston Organizing Project.

Public policy in the U.S. presumes unionism to be an engine of economic growth.



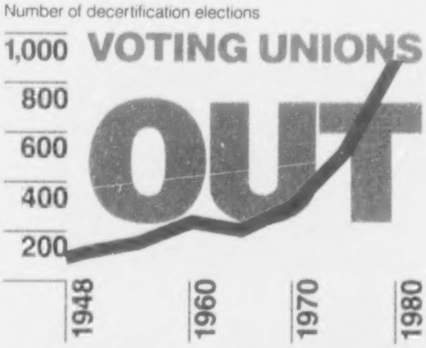
Unions now win fewer than half the elections held under the supervision of the NLRB to determine whether workers want to be organized. At their 1937 peak, unions won 94% of elections.

of business economics at the University of Chicago, has demonstrated that in the last few decades the compensation gains won by the United Auto Workers and the United Steelworkers got wildly out of line relative to those in manufacturing generally. In both autos and steel, hourly employment costs in the early Fifties were around 15% above the manufacturing average—a premium basically reflecting the higher skill levels required in the two industries.

No more pass-alongs

The premium rose sharply during the last 30 years, however, and by 1980 was up to 86% in both industries. By this time, of course, both were finding themselves unable to compete with foreign products and were pleading for various combinations of union givebacks and import protection. Clearly, there were major management failures in both industries: both were slow in responding to the growth and extraordinary dynamism of their overseas competition during the Seventies. Both seemed slow to realize that their grip on the U.S. market was not ordained by nature. In retrospect, it seems clear that those outsize wage gains, which could no longer be passed on to consumers, signified shortsightedness in management as well as the unions. Still, the 240,000 auto workers and 100,000 steel-industry workers now unemployed can tell themselves that their own unions had a lot to do with their predicament.

This is all most peculiar because public policy in the U.S. presumes unionism to be an engine of economic growth. The presumption reflects the ideas of the deflationary Thirties—notably the idea that recovery from the Great Depression required a major shift of resources from capital to labor. The National Labor Relations Act (better known as the Wagner Act), passed in 1935, became the foundation on which union power in America was built. The "findings and policy" in Section 1 of the act are a statement of the case for unionism. Collective bargaining is desirable, says the act, because it eliminates the evident "inequality of bargaining power" between the lone employee and the giant corporation. This inequality "tends to aggravate recurrent business depressions, by depressing wage rates and . . . purchasing power . . ." For these and other reasons it became "the policy of the United States" to take measures "encouraging the practice and procedure of collective bargaining."



The number of decertification elections —in which workers can vote out a union —has increased almost tenfold since the late Forties. Unions lose three-quarters of the elections these days.

These words and ideas are still in our basic labor law. The 1947 Taft-Hartley Act gave some new rights to employers (for example, it gave them freedom to argue the case against unions attempting to organize their workers) and imposed some new limits on union power (for example, it banned the closed shop, under which only those who were already union members could be hired). Taft-Hartley, passed over President Truman's veto, was widely denounced by union leaders as a "slave-labor law." Nevertheless, it retained the Wagner Act's affirmative perspective on collective bargaining.

The "findings" built into these laws in the Thirties are hard to reconcile with today's reality. Many people intuitively accept the thought that unions raise wages and therefore protect workers against hard times. But consider the matter from the perspective of a steelworker at the Jones & Laughlin plant in Aliquippa, Pennsylvania. In 1937, when the Supreme Court upheld the Wagner Act, the opinion by Chief Justice Charles Evans Hughes dealt at length with J&L, which was judged to have engaged in unfair labor practices at Aliquippa. The Court approvingly noted the Wagner Act's finding that collective bargaining might forestall depressions. In 1982 that thought is still in the law, but the news from Aliquippa leaves no room for doubt that there is another depression in the community and that unionism has had something to do with it.

To be sure, economists broadly agree that unions do raise the wages of their working members; on average, unionized workers get paid more than they would if they were unorganized. However, there have clearly been some periods, apparently including the late Sixties, in which unionized workers gained *less*. This could easily happen in an economic environment marked by (a) an unexpectedly strong demand for labor and (b) long-term contracts that left union workers locked in at pay levels below what they could command in a free market.

In any case, the increases attributable to unionism are far less than one might suppose from reading newspaper stories about union settlements. The stories frequently give one the impression that the entire gain reflected the union's efforts. In

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Richard Freeman, 37, just about always wears hats, even indoors, and is also atypical in believing that unions increase productivity—a proposition that he and his Harvard colleague James Medoff, 35, have been arguing formidably. However, they agree that unionism means lower returns to capital and less flexibility for managers. Says Freeman: "I wouldn't want my research assistants organized."

Richard Howard

Capitalism and Freedom, originally published in 1962, Milton Friedman observed sardonically: "The wages of domestic servants have risen very greatly in recent years. Had there been a union of domestic servants, the increase would have come through the union and would have been attributed to it."

Monopoly power

Still, economists generally agree that collective bargaining leads to above-market compensation in the unionized labor force. They also agree, to a quite remarkable extent, about the magnitude of this union effect. In his *Free to Choose*, published in 1979, Friedman put it at about 10% to 15%, supporting this estimate by citing econometric analyses published in the Sixties by H. Gregg Lewis, a respected econometrician at Duke University. Lewis is now preparing a major new report on the union wage effects, but most economists would be surprised if the magnitudes have changed much since his earlier work. Richard Freeman and James Medoff of Harvard have also concluded, after an exhaustive search of later literature on union wage effects, that union workers are probably earning about 10% to 15% more than they would in an unorganized world. Off at the lower end of the range, Professor Jacob Mincer of Columbia is estimating a gain of some 10% for union workers. At the higher end is Albert Rees, formerly professor of economics at Princeton and now president of the Sloan Foundation, whose latest (1977) edition of *The Economics of Trade Unions* estimates an edge of 15% to 20%. Rees observed recently that the gap may have widened still further in the inflationary late Seventies, when union workers were benefiting from their increasingly standard cost-of-living adjustments; however, he assumes that the gap is now shrinking in the giveback era and could soon be in the 15% zone.

Economists also agree on the source of the union premium. It reflects monopoly power—the legal right of unions to gain effective monopolies over companies' labor forces. Some weak unions, like those in the textile industry, have probably not raised their members' wages at all for many years. On the other hand, unions with especially strong monopoly positions—like the United Mine Workers and many construction locals—were until recently able to extract gains of 30% or more above market rates for their members. Ultimately, unions that pursue such policies find themselves with shrinking memberships; however, this trade-off is sometimes quite acceptable in unions dominated by workers who have so much skill and seniority that they are unworried, rightly or wrongly, about losing their own jobs. The UMW, many construction unions, and the International Typographical Union have histories of pushing for pay levels that guaranteed high unemployment rates among their members.

While the economics profession broadly agrees that pay in the unionized sector has been raised, it most emphatically disagrees with the notion that collective bargaining increases purchasing power in the country as a whole. Those 10% to 15% gains for the unionized minority are offset by losses for the unorganized majority—losses estimated by Lewis of Duke at 3% to 4% in his findings from the Sixties. In other words, unionism results in *below-market* rates in the non-union sector. In both sectors, furthermore, unionism results in "a deadweight loss of efficiency," as Albert Rees put it several weeks ago.

How come? The prevailing model of the union impact is one in which those above-market wage gains have several large side effects. First, union employers overmechanize. They end up with higher capital-labor ratios than are optimal. They reach for the robots sooner, and more extensively, than they otherwise might. Many people equate increased mechanization with increased efficiency, but in this case the shift is inefficient—it leaves the employer with higher unit costs than he'd have if he could simply employ non-union market-rate labor instead of machines.

Second, employers contemplating high standard wage rates make special efforts to get only the most productive workers. "You're not going to have some teenage bozo doing the job when you're looking at those rates," Richard Freeman observes. However, the superior workers aren't superior enough to justify the union rates. The 10% to 15% gap that keeps turning up in the econometric analyses is a *net* gap. Columbia's Jacob Mincer, who has computed the gap at 10%, has also calculated that the gross figure would be around 20%. In other words, he's saying that employers get stuck with labor costs 20% above what they'd pay in the absence of unions and then recover perhaps half of this loss "by systematic rationing ... by hiring more productive workers from the queue."

The missing steelworkers

When employers (a) raise their capital-labor ratios and (b) raise their hiring standards, a lot of workers are inevitably "crowded out" (to steal a metaphor from the financial markets). Clearly, the effect of collective bargaining is to push the less-skilled workers out of the unionized sector. Yale Brozen of Chicago estimates that the "superpremium pay" in the steel industry has left employment there 300,000 or 400,000 less than it would be with only a normal premium. As Brozen observes,

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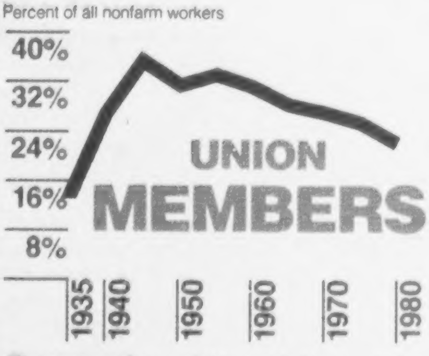
Why would anyone quit when he's earning 10% more than he's worth?

those hundreds of thousands are anonymous and invisible. Unlike striking steelworkers, nobody ever sees them on television and the public is never invited to contemplate their economic misfortunes. (For that matter, few of the individuals think of themselves as steelworkers manqué.) But somewhere out there, a lot of people are earning substantially less than they would be if the steel industry had not been unionized. Their problem is not just that they lose the "normal premium" associated with a high-wage industry like steel. They also suffer because, along with other crowded-out workers, they're pushed into a non-union sector whose swollen size assures lower wages.



The union share of the work force, in decline since World War II, is now pegged at about 22%. This figure—based on unaudited membership reports to the Labor Department—is surely inflated.

Economists also agree about one presumably desirable effect of unionism: it is associated with lower quit rates. Union workers seem to like their jobs more than do comparable non-union workers. Professors Freeman and Medoff of Harvard, whose assessment of unionism is more positive than that of most economists, emphasize the importance that workers attach to "voice"—that is, to the opportunity to talk back to management—and relate the lower quit rates primarily to the voice factor. On the other hand, economists who view unions essentially as wage monopolists explain the lower quit rates primarily by the union premium. Why *would* anyone quit when he's earning 10% more than he's worth?

One critical issue on which economists do *not* agree these days concerns the effect of unions on productivity. Until Freeman and Medoff came along a few years ago, it was very hard to find serious economists arguing that unions increased productivity. To be sure, one could always cite particular cases of badly managed companies that were suddenly made to pay union wages and then, shocked into action, belatedly took measures to raise productivity. Albert Rees devotes a fair amount of space to this "shock effect" in *The Economics of Trade Unions*, but he plainly views the effect as exceptional and, when it does occur, transitory. Says Rees: "Such large shock effects may be plausible in a few cases where unions are newly established. But it is not plausible to expect them repeatedly as the union wins subsequent wage increases."

Economists have several rather obvious reasons for viewing unionism as an impediment to productivity. First, unions impose work rules that sometimes lead to featherbedding and almost always limit flexibility on the job. Second, unions impose rules that overvalue seniority—that make it difficult for managers to pay and promote on the basis of merit. (Not, as the article on executive compensation on page 42 makes plain, that managers always pay *themselves* on a strict merit basis.) The union emphasis on standard rates also tends to discourage ambitious younger workers from seeking the kind of training that would help them get ahead. Most economists see these deleterious effects as swamping the productivity gains associated with greater mechanization in unionized companies. In addition, most economists would observe that unionism, by depressing wages in the non-union sector, *reduces* mechanization there.

Freeman, Medoff, and several of their colleagues in what has been called "the Harvard School" argue that unionism means higher productivity—perhaps 10% higher on average. Their case, some parts of which have already been stated in FORTUNE (A Difference of Opinion, December 1, 1980), rests partly on the lower quit rates and the efficiencies associated with reduced turnover. In part it rests on a belief that the shock effect is more prevalent than Rees and other economists believe. Freeman and Medoff acknowledge that compensation based on merit is relatively scarce in the unionized sector; however, they argue that workers like the job security provided in union contracts. They also like the unions' standard wage rates. Standardization forestalls suspicion that the boss plays favorites and indulges prejudices in pay and promotion, and the end result of standard rates, they believe, is a more harmonious working environment. All these contentions have been fiercely disputed in several lengthy exchanges between the Harvard School and its adversaries; still, there is now a debate where once there was near unanimity. Commenting recently on one of James Medoff's productivity studies, Albert Rees remarked: "The AFL-CIO should have a statue of him outside their building in Washington."

An inescapable loss

However, the productivity debate is not getting at the ultimate economic question about unions. They might increase productivity on average and still be economically undesirable because they reduce efficiency, producing misallocations of resources in both the union and non-union sectors. Clearly, unionism increases unit costs. Clearly, therefore, it lowers the return to capital in the long run—which is why capital keeps fleeing to the less-unionized Sunbelt. Clearly, such discouragements to investment lower incomes overall. Nobody knows the magnitude of these losses, but everyone—including Freeman and Medoff—agrees that some inescapable loss of wealth is associated with collective bargaining. Our stated public policy is clearly wrong in its factual premises. To make the case for unionism, you would have to go beyond efficiency and bring other values into your equation.

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Big government is turning out to be a bit of a competitor for the unions.

Freeman and Medoff are doing this. They appear to be committed egalitarians, and they are trying to build a case that unions are desirable because they reduce the degree of economic inequality in American society. In capsule form, their argument is that the standardized wage rates equalize things within the union sector, and that this effect more than compensates for the acknowledged inequalities created between the union and non-union sectors. The Freeman-Medoff calculations will be on display in a major work, scheduled to be published next year. It is certain to trigger further controversy, not only about their case for unions but about the egalitarian values on which the case depends—notably including the justice of standardized pay for workers of unequal ability and motivation.

Union competitors

Meanwhile, the case for unionism is being weakened by some interesting new non-economic considerations. The unions' dismal recent record in representation elections suggests that many workers who once would have voted overwhelmingly for collective bargaining now view it as unnecessary. Why might workers gravitate to this view? Two possible answers leap to mind: big government and big business.

Big government, whose infinite manifestations came into being with the enthusiastic blessings of organized labor, now turns out to be a bit of a competitor for the unions. Do they promise to improve working conditions? So does the Occupational Safety and Health Administration. Do unions promise to raise the wages of low-income workers? If so, they're competing with the minimum-wage laws, whose coverage has been steadily broadened over the years and which now require $3.35 an hour. Do unions promise to get better pensions for their members? So does the U.S. Department of Labor, which administers the Employee Retirement Income Security Act of 1974 (ERISA), and which is still busily interpreting for employers the numerous pension-related responsibilities imposed on them by the act. The Labor Department and the Equal Employment Opportunity Commission are also available to support workers who believe that they've been discriminated against on the basis of race or sex—which leaves the government again standing on part of the turf long claimed by unions, whose single strongest selling point over the years has been their presumed ability to prevent arbitrary treatment of the individual worker.

The changes in large corporations are harder to evaluate, but to some uncertain extent non-union corporations are manifestly trying harder than they once did to treat employees fairly. Big business takes employee morale seriously these days. Personnel departments are increasingly responding to a "human-relations ideology" that labors to take the rough edges off the company's dealings with workers. In 30% of all non-union companies, some kind of formal grievance procedure is now in place. Professor Fred K. Foulkes of the Boston University School of Management, who has studied the personnel policies of 26 large non-union companies (20 of which were on the FORTUNE 500 in 1975), concluded that these companies were in many ways offering blue-collar workers the best of both worlds. In dealing with pay and benefit issues, and also in setting the rules by which plants were run, many of the companies were to a remarkable degree limiting the freedom of their managers "beyond anything that a union would be able to negotiate." Foulkes observed that the companies had employees whose attitudes retained "some undefined intangibles that . . . relate to morale, trust, confidence, spirit, good faith, an identification with management, and a consequent avoidance of the we-they adversary relationship that can so frequently characterize the union-management relationship."

Presumably, the threat of unionism helps concentrate the minds of the human-relations ideologues. But much of what's involved in all their good works looks simply like modern management. Senior executives want their managers to go by the book, to avoid actions that seem arbitrary, to avoid anything that might poison community relations. Richard Freeman acknowledges that, on average, "non-union big companies generally look more like union companies than they look like small non-union companies." Which may explain why the employees of large companies do not, in general, see a very powerful case for collective bargaining nowadays.

Pussycats and tigers

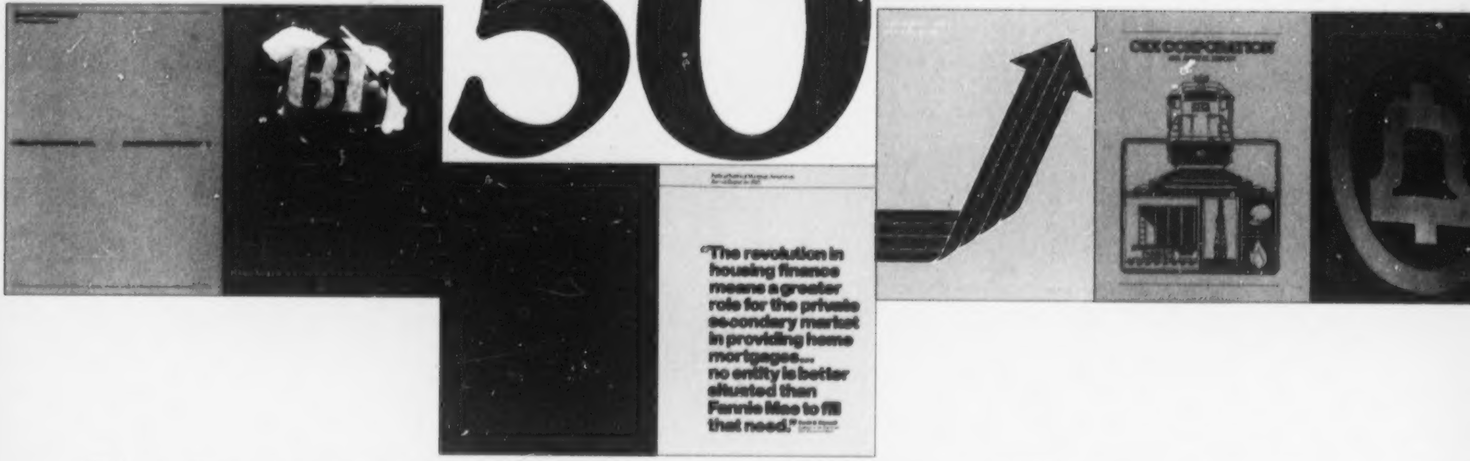
The ultimate question—do we really want to encourage collective bargaining?—could begin to look more interesting in the years ahead. Right now, any notions about changing the basic statutes, and depriving the unions of the monopoly powers they have enjoyed for the past 45 years, have to be thought of as somewhat utopian. But the momentum behind the givebacks may be signaling some larger changes down the road a bit.

Those who believe that the giveback phenomenon is transitory—that at bottom it reflects only the recession—may be in for some surprises. By their analysis, union tigers have often turned into pussycats during recessions, but they always recover their stripes when the economy turns up, and will do so again this time. To say the least, the analysis is incomplete.

The industries now extracting givebacks from organized labor are, by and large, those in which market forces have been fundamentally transformed during the past decade or so. In some cases because of powerful new international competition, in some cases because of deregulation, large chunks of American business have lost a share of the market power they once enjoyed. In the circumstances, they can no longer opt for business as usual in dealing with organized labor's monopolists. The game of excessive wage increases, which are then passed on to consumers, is coming to an end. This stubborn fact, perhaps more than any large new understanding of what unions do to output and employment, might ultimately lead Americans to reconsider whether public policy should promote collective bargaining. ■

THE FORTUNE DIRECTORY OF THE LARGEST NON-INDUSTRIAL COMPANIES

The 50s


CSX CORPORATION
"The revolution in housing finance means a greater role for the private secondary market in providing home mortgages... no entity is better situated than Fannie Mae to fill that need."

This year FORTUNE presents for the first time a list of the 50 largest diversified service companies in the U.S., a group that is becoming increasingly important as a distinct sector of the economy. What these companies sell is primarily skill, not money, stocks, transportation, gas and electricity, insurance, or consumer goods—the categories covered by FORTUNE's other "50 largest" lists—or the physical objects manufactured or mined by the industrial corporations on the FORTUNE 500 and Second 500.

Of the diverse companies on the list, some distribute raw materials to industry, surgical instruments to hospitals, food to the marketplace, or box-office hits to the neighborhood theater; some design massive industrial complexes, towering skyscrapers, or the house next door; and others broadcast the evening news or deliver business tips to clients. The diversified service companies include a number of the best-known names in American business—CBS (No. 6), American Broadcasting (No. 14), and Walt Disney Productions (No. 44). And they are not small. Only six companies on the list had revenues last year of less than $1 billion.

The 350 non-industrial companies on the diversified service roster and the other "50s" lists on the following pages came through 1981's turbulent economic seas, beset by inflation and recession, far better than the 1,000 largest industrials, whose profits did not keep up with inflation. Earnings of five of the seven non-industrial groups grew 14.8%, well ahead of the 1981 average inflation rate of 10.4% as measured by the consumer price index. (Earnings are not reported for the life-insurance group; comparable 1980 data are not available for the diversified service list.) Astonishingly, the 50 utilities scored their best profit gains since FORTUNE began compiling these lists in 1955.

Investors in the non-industrial stocks came out remarkably well for a recession year. Median total return to investors, including both dividends and price appreciation, was 12.6% for the 276 companies whose stock is actively traded, compared with a negative .35% median return for the FORTUNE 500 and 1.4% for the Second 500.

DIVERSIFIED SERVICE

Phibro Corp., a marketer of commodities, tops the diversified service list with sales of $25 billion. If it were an industrial, this corporation, which merged with the Salomon Bros. investment-banking firm last October, would have been No. 12 on the FORTUNE 500. Second and third behind Phibro are Halliburton (1981 sales: $8.5 billion), an oil-field services company, and Fluor ($6 billion), an engineering and construction outfit.

The 50 diversified service companies as a group performed badly for investors. Five are cooperatives, but of the 45 stock companies, 23 showed declines in total returns to investors. The weakest performer: U.S. Home (No. 45); investors in the giant construction firm were punished with a minus 52.1% return last year. A couple of the stocks on the list were big winners—Univar, a Seattle distributor of industrial chemicals (No. 46), and Subaru of America, which imports and markets Subaru cars and parts (No. 49). For more on the investment performance of diversified service companies, see page 149.

COMMERCIAL BANKING

The 50 top commercial-banking companies didn't quite manage to stay even with inflation in 1981, showing increases of nearly 9% in both assets and net income. In 1980 the companies also failed to achieve real growth in either respect. For the second year in a row, BankAmerica and Citicorp swapped places at the head of the list. BankAmerica, No. 2 in assets in 1980, regained its customary spot as the nation's largest bank, but lost the No. 1 slot in net income to Citicorp.

Twelve banking companies registered decreases in earnings, with Crocker National (No. 13) having a 34.3% decline. In 1981 Crocker lost some $700 million in deposits, much of it going to the money-market funds, which, unfettered by regulation, can pay higher rates to investors.

A North Carolina bank, First Union of Charlotte, undertook an aggressive expansion program and achieved the greatest growth in assets. The 61.4% increase pushed First Union into the top 50 for the first time, as No. 49. Another North Carolinian, Wachovia of Winston-Salem (No. 36), posted a 49.2% total return to investors for 1981, the best on the list.

LIFE INSURANCE

Though the 50 largest life insurers set a record in the dollar amount of policies in force, they had a bad year in 1981. In net gains from operations, the insurers recorded the worst figures since 1970. Aggregate net gains for fiscal 1981 dropped 12.4% from 1980, with 24 of the top 50 showing declines. Total assets, which went up 7.5%, shrank slightly in inflation-adjusted terms. The slump, some analysts believe, can be attributed to economic conditions, intense competition, and investors' skepticism about the value of whole-life insurance in inflationary times.

The top 11 companies kept their 1980 rankings, with Prudential still at the head of the pack. The one newcomer on this year's list is Allstate Life, a subsidiary of Sears Roebuck, No. 1 on the retailing list. Allstate's 21.6% increase in assets makes it No. 50, a rank occupied on last year's insurance list by Bankers Life & Casualty.

DIVERSIFIED FINANCIAL

The recession battered the companies on the diversified financial list in 1981. Only 17 of the 50 reported higher profits, and the group's total net income dropped 15.1%, far worse than the previous year's 8.2% slide. But revenues increased 10.9% and assets 12.6%, with the strongest performances coming from the brokerage houses. Donaldson Lufkin & Jenrette (No. 25) posted an increase in earnings of 51.5% and a 1981 total return to investors of 87.6%, the highest among this group.

The bad news comes, of course, from the 17 savings and loan associations on the list. Of these, 16 reported losses in 1981. Money costs soared to new highs as short-term interest rates remained far above the yields on S&L mortgage portfolios, producing operating losses throughout the industry. The S&L that showed a profit is in Los Angeles: Financial Corp. of America, No. 32 (see page 73).

RETAILING

The 50 largest retailing companies recovered admirably in 1981 from a disappointing 1980. Sales reached $221 billion, up 10%. Most remarkable was the jump in net income—14.6%. The improvement can be attributed to cooling inflation, which caused lower than anticipated inventory charges against earnings, and a stronger than expected Christmas selling season. Still, eight companies had lower earnings and two lost money.

Wal-Mart (No. 30) was the fastest-growing company on the list, booking a 49.1% increase in sales. This growth reflects aggressive expansion: Wal-Mart opened 69 new stores and expanded 18 others. Fisher Foods (No. 38), an Ohio supermarket chain, achieved a total return to investors of 75.7% for 1981—the highest total return of any retailer. But this admirable result chiefly came about from the company's spinning off part of its business and recording the proceeds as income.

TRANSPORTATION

The high fliers among the top 50 transportation companies last year were the railroads; the airlines couldn't get off the ground. Railroads did well enough to boost net income for the group 14.2% over 1980 on revenue growth of 6.5%, the lowest since 1970. Of the 12 railroads on the list, only Santa Fe Industries showed a decline in earnings—19.7%. CSX Corp.—successor to Chessie System and Seaboard Coast Line—knocked UAL, parent of United Airlines, out of first place with a 12.2% boost in operating revenues.

Investors in railroads got a good ride, especially with Kansas City Southern Industries (No. 48). An investor who got aboard that railroad ten years ago would have realized a 25.6% total annual return, thanks mostly to strong coal markets.

Three airlines—Texas Air, Ozark Airlines, and World Airways—won places on the list for the first time, as Nos. 31, 45, and 46. But of the 18 passenger airlines, nine lost money and two showed decreases in earnings. The hardest hit, Braniff (No. 19), lost $160.6 million in 1981 and chalked up the worst ten-year total return to investors, minus 16%, foreshadowing the company's collapse in 1982's first half.

UTILITIES

The 50 largest utilities performed better than any other of the non-industrial groups in 1981. Net income skyrocketed 21.5% from the previous year, the strongest performance ever for the utilities list. The improvement can be traced to stabilizing fuel prices, a more generous attitude toward rate increases on the part of regulators—who granted boosts of $8.3 billion in 1981, or $2.4 billion more than in 1980—and a leveling off of construction spending. Assets grew 9.8%, nearly the same as the previous year, and median return on equity reached 13%, a percentage point above 1980.

The one utility that didn't have a reasonably good year was General Public Utilities (No. 19). Still hampered by the financial impact of the 1979 nuclear accident at its Three Mile Island, Pennsylvania, plant, GPU once again showed the worst return on stockholders' equity—zero.

El Paso Natural Gas (No. 35) boasted the highest return on stockholders' equity, 27.7%. The Houston utility's strength comes not only from its main business of natural-gas transmission, but also from a 106% increase in operating income in oil and gas production operations. Like El Paso, Transco (No. 39) is a pipeline company that got a boost from oil and gas exploration and production; the increase in operating earnings from these activities was 129%. This bonanza helped make Transco the most profitable utility for investors, providing a 17.9% annual total return over the last decade. —BRIAN DUMAINE

The 50 Largest DIVERSIFIED SERVICE COMPANIES (ranked by sales)

RANK '81	COMPANY	SALES[1] ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
1	**Phibro** (New York)	25,097,700	5,788,000	1	289,300	2	1,477,200	3
2	**Halliburton** (Dallas)	8,508,133	5,579,595	2	674,268	1	3,167,177	1
3	**Fluor** (Irvine, Calif.)[2]	6,073,395	4,427,158	3	159,238	4	1,668,207	2
4	**Super Valu Stores** (Eden Prairie, Minn.)[3]	4,203,665	593,291	29	55,577	22	231,583	30
5	**Foremost-McKesson** (San Francisco)[4]	4,153,345	1,275,087	17	69,255	18	453,988	14
6	**CBS** (New York)	4,027,025	2,425,599	5	163,811	3	1,246,763	4
7	**Fleming Companies** (Oklahoma City)	3,398,603	411,165	36	25,071	32	153,455	35
8	**Tesoro Petroleum** (San Antonio)[5]	3,064,542	760,412	25	80,230	14	444,800	15
9	**AGRI Industries** (West Des Moines, Iowa)[6]	2,915,014	264,286	43	3,349	48	61,554	46
10	**American Hospital Supply** (Evanston)	2,870,059	1,770,180	7	146,634	5	1,025,966	6
11	**Associated Milk Producers** (San Antonio)[6]	2,632,894	350,500	40	4,956	47	98,747	41
12	**Alco Standard** (Valley Forge, Pa.)[5]	2,521,661	909,318	21	57,797	21	304,599	24
13	**Grain Terminal Association** (St. Paul)[6,7]	2,448,530	564,657	31	19,633	34	186,275	31
14	**American Broadcasting** (New York)	2,443,713	1,588,349	10	146,313	6	975,443	7
15	**IU International** (Wilmington)	2,323,197	1,440,534	12	74,932**	16	326,279	23
16	**Pittston** (Greenwich, Conn.)	2,228,480	1,343,558	15	42,729	25	669,329	11
17	**Amfac** (Honolulu)	2,148,008	1,371,623	13	44,208	24	482,025	13
18	**Malone & Hyde** (Memphis)[8]	2,146,587	405,156	38	18,386	35	157,387	33
19	**Hospital Corp. of America** (Nashville)	2,063,637	2,958,156	4	111,131	10	767,600	10
20	**Morrison-Knudsen** (Boise)	2,058,331	787,053	24	37,104	27	265,541	27
21	**Turner Construction** (New York)	1,953,040	411,853	35	9,588	44	39,668	48
22	**Ryder System** (Miami)	1,946,456	1,759,471	8	74,031	17	490,152	12
23	**Petrolane** (Long Beach, Calif.)[5]	1,878,085	923,246	19	99,275	11	435,387	17
24	**Holiday Inns** (Memphis)	1,765,110	1,815,365	6	137,356	7	772,377	9
25	**Foster Wheeler** (Livingston, N.J.)	1,674,000	718,153	28	64,302	19	330,597	20
26	**Dillingham** (Honolulu)	1,627,205	835,330	23	30,069	29	352,157	19
27	**Genuine Parts** (Atlanta)	1,584,642	585,282	30	77,543	15	410,689	18
28	**Dravo** (Pittsburgh)	1,511,908	719,983	27	17,320	36	254,077	29
29	**Wetterau** (Hazelwood, Mo.)[4]	1,503,223	307,439	42	16,088	38	104,150	40
30	**Sysco** (Houston)[8] *	1,382,204	332,422	41	26,812	30	153,762	34
31	**GDV** (New York)[9]	1,347,803	1,338,000	16	7,959	46	328,969	21
32	**Humana** (Louisville)[10]	1,342,906	1,502,232	11	93,177	12	297,314	26
33	**Commercial Metals** (Dallas)[10]	1,336,634	240,826	45	11,245	42	105,951	39
34	**Dun & Bradstreet** (New York)	1,331,035	905,694	22	121,474	9	435,620	16
35	**MCA** (Universal City, Calif.)	1,328,988	1,367,699	14	89,788	13	928,792	8
36	**S.M. Flickinger** (Buffalo)[11]	1,197,770	142,216	47	9,080	45	60,597	47
37	**Parsons** (Pasadena)	1,184,473	414,275	33	37,153	26	149,896	36
38	**Fischbach** (New York)[5]	1,118,865	436,373	32	22,222	33	134,248	38
39	**Centex** (Dallas)[4]	1,094,057	918,032	20	62,405	20	300,786	25
40	**Raymond International** (Houston)	1,091,935	412,096	34	15,848	39	146,543	37
41	**Dairymen** (Louisville)[6,10]	1,085,227	230,165	46	13,727	40	75,280	44
42	**Universal Leaf Tobacco** (Richmond)[12]	1,041,835	405,779	37	31,272	28	178,868	32
43	**Super Food Services** (Dayton, Ohio)[10]	1,037,179	128,654	49	3,336	49	29,687	50
44	**Walt Disney Productions** (Burbank, Calif.)[5]	1,005,040	1,610,009	9	121,480	8	1,167,118	5
45	**U.S. Home** (Houston)	982,229	754,517	26	10,017**	43	263,814	28
46	**Univar** (Seattle)[3]	970,245	365,071	39	17,062	37	98,319	42
47	**Landmark** (Columbus)[6,10]	958,612	104,500	50	(22,168)‡	50	31,100	49
48	**CFS Continental** (Chicago)[5]	930,045	249,121	44	11,490	41	91,791	43
49	**Subaru of America** (Pennsauken, N.J.)[2]	916,080	134,110	48	26,285	31	66,737	45
50	**American Medical International** (Beverly Hills)[10]	913,536	984,149	18	50,807	23	326,619	22
	TOTALS	**126,367,086**	**56,065,759**		**3,510,807**		**22,724,923**	

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 146.

N.A. Not available

[1] Net sales include all operating revenues and revenues from discontinued operations when they are published. All figures are for the fiscal year ending December 31, 1981, unless otherwise noted. Sales of subsidiaries are included when they are consolidated. All companies on the list must have derived more than 50% of their revenues from wholesaling, oil and gas field services, contract construction, broadcasting, or other service businesses.

[2] Figures are for fiscal year ending October 31, 1981.

[3] Figures are for fiscal year ending February 28, 1981.

[4] Figures are for fiscal year ending March 31, 1981.

[5] Figures are for fiscal year ending September 30, 1981.

[6] Company is a cooperative. Primary earnings per common share not available.

[7] Figures are for fiscal year ending May 31, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		SALES		EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE	
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK
6,950	33	1.2	36	19.6	11	4.23	6.67	0.46‡	24.84	4	(31.91)	36	16.00	15
109,268	1	7.9	3	21.3	9	5.72	4.25	0.54	26.62	3	(36.02)	38	16.64	12
44,170	3	2.6	21	9.5	41	2.83	2.73	0.26	26.96	2	(48.67)	43	23.00	4
18,511	19	1.3	33	24.0	6	3.05	2.50	0.52	19.35	14	36.61	6	22.30	5
16,700	21	1.7	31	15.3	25	4.33	4.43	1.02‡	15.56	21	23.41	9	10.47	24
23,846	14	4.1	14	13.1	32	5.86	6.92	2.01‡	11.29	31	5.36	18	4.69	31
9,070	31	0.7	44	16.3	22	3.43	3.25	2.14	4.83	39	5.55	17	13.74	19
2,500	44	2.6	22	18.0	16	4.84	7.15	1.02	16.85	19	(5.47)	24	2.96	33
675†	49	0.1	49	5.4	46	N.A.	N.A.	N.A.	—		—		—	
35,000	6	5.1	12	14.3	30	3.08	3.03	0.85	13.74	28	(18.11)	32	1.26	38
3,700	42	0.2	48	5.0	47	N.A.	N.A.	N.A.	—		—		—	
18,700	18	2.3	23	19.0	13	2.88	2.63	0.84	13.11	30	19.10	12	13.78	18
4,103	39	0.8	42	10.5	38	N.A.	N.A.	N.A.	—		—		—	
13,600	25	6.0	7	15.0	27	5.13	5.18	0.62‡	23.53	5	32.47	7	10.71	22
35,000	7	3.2	17	23.0	7	3.35**	5.25‡	1.64	7.40	38	(15.14)	30	3.94	32
16,2[illegible]	22	1.9	27	6.4	45	1.13	2.02	1.17**	(0.35)	42	3.24	21	6.28	28
24,000	13	2.1	24	9.2	42	3.04	5.37	1.92	4.70	40	4.41	19	2.42	36
8,050	32	0.9	40	11.7	34	2.33	3.26	0.95	9.39	36	(26.62)	35	2.29	37
75,000	2	5.4	10	14.5	29	2.23	1.73	0.32	21.43	11	(4.41)	23	15.35	16
26,837	9	1.8	29	14.0	31	3.66	3.50	0.69	18.16	16	(39.82)	41	20.55	7
2,500	45	0.5	46	24.4	5	4.65	3.97**	1.28	13.77	27	28.47	8	18.40	8
19,227	15	3.6	16	15.1	26	3.84	3.21	0.96	14.87	24	15.59	14	2.44	35
18,755	17	5.3	11	22.8	8	1.90	1.47	0.31	19.88	13	(32.76)	37	11.86	21
43,249	4	7.8	4	17.8	17	3.66	2.92	1.41	10.01	35	6.40	16	(2.03)	42
19,000	16	3.8	15	19.5	12	1.87	1.74	0.23	23.31	6	(38.53)	39	21.68	6
14,000	23	1.9	28	8.8	43	1.99	2.80	0.35**	18.98	15	96.31	3	17.57	11
11,732	29	4.9	13	18.9	14	2.80	2.46	0.71	14.71	25	23.34	10	5.40	30
13,600	26	1.1	37	6.8	44	1.31	1.69	0.87	4.18	41	(44.37)	42	10.05	25
4,625	38	1.1	38	15.4	24	2.13	1.83	0.77	10.71	33	(14.62)	29	(0.22)	40
6,000	36	1.9	26	17.4	19	2.82	2.19	0.64	15.99	20	50.57	5	15.04	17
25,500	11	0.6	45	2.4	49	0.39	1.82	1.99	(15.04)	44	—		—	
40,400	5	6.9	5	31.3	2	2.33	1.54	0.06‡	44.19	1	(0.24)	22	24.91	2
2,779	43	0.8	41	10.6	37	2.53	4.13	0.39	20.56	12	(11.77)	28	16.53	14
26,117	10	9.1	2	27.9	3	4.33	3.68	1.16	14.08	26	14.53	15	9.95	26
17,000	20	6.8	6	9.7	40	3.77	5.83	0.77	17.22	17	(10.44)	27	18.10	9
6,353	35	0.8	43	15.0	28	3.09	2.57	0.89	13.25	29	18.54	13	12.78	20
9,600	30	3.1	18	24.8	4	3.02	2.21	0.40	22.40	8	(17.06)	31	24.37	3
12,000†	27	2.0	25	16.6	21	6.59	4.62	2.32	11.00	32	21.83	11	2.69	34
6,500	34	5.7	8	20.7	10	5.16	2.90	0.67	22.65	7	(38.82)	40	(1.37)	41
12,000	28	1.5	32	10.8	36	2.66	1.23	0.37	21.81	9	(21.37)	34	16.55	13
5,482	37	1.3	34	18.2	15	N.A.	N.A.	N.A.	—		—		—	
14,000†	24	3.0	19	17.5	18	3.55	3.20	0.85	15.37	22	(20.56)	33	18.06	10
1,835	47	0.3	47	11.2	35	1.74	1.70	0.78	8.35	37	(5.90)	25	9.74	27
25,000	12	12.1	1	10.4	39	3.72	4.16	0.92	14.99	23	3.90	20	6.19	29
2,366	46	1.0	39	3.8	48	0.69**	3.32	1.58	(7.95)	43	(52.13)	44	(2.05)	43
3,858	41	1.8	30	17.4	20	2.65	2.35	0.38	21.44	10	122.75	1	25.84	1
1,600	48					N.A.	N.A.	N.A.	—		—		—	
4,000	40	1.2	35	12.5	33	2.12	1.60	0.78	10.52	34	62.28	4	1.21	39
515	50	2.9	20	39.4	1	4.36	2.95	N.A.	—		113.97	2	—	
27,000	8	5.6	9	15.6	23	1.60	1.41	0.33	17.10	18	(6.64)	26	10.65	23
888,540														

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[8] Figures are for fiscal year ending June 27, 1981.

[9] GDV is 98% owned by City Investing.

[10] Figures are for fiscal year ending August 31, 1981.

[11] Figures are for fiscal year ending July 25, 1981.

[12] Figures are for fiscal year ending June 30, 1981.

The 50 Largest COMMERCIAL-BANKING COMPANIES (ranked by assets)

RANK		COMPANY	ASSETS[1]	DEPOSITS		LOANS[2]		EMPLOYEES	
'81	'80		($000)	($000)	RANK	($000)	RANK	NUMBER	RANK
1	2	**BankAmerica Corp.** (San Francisco)	121,158,350	94,369,453	1	71,236,237	2	87,508	1
2	1	**Citicorp** (New York)	119,232,000	72,125,000	2	77,139,000	1	58,200	2
3	3	**Chase Manhattan Corp.** (New York)	77,839,338	55,299,670	3	50,459,433	3	34,150	3
4	4	**Manufacturers Hanover Corp.** (New York)	59,108,519	42,462,035	4	37,448,484	4	26,219	6
5	5	**J.P. Morgan & Co.** (New York)	53,522,000	36,024,000	5	28,220,000	6	12,062	14
6	6	**Continental Illinois Corp.** (Chicago)	46,971,755	29,594,005	6	31,463,328	5	12,713	11
7	7	**Chemical New York Corp.**	44,916,933	29,429,577	7	27,789,275	7	19,713	7
8	9	**First Interstate Bancorp.** (Los Angeles)[3]	36,982,091	27,407,174	8	20,795,103	9	31,197	4
9	8	**Bankers Trust New York Corp.**	34,213,010	23,345,022	11	18,504,025	11	12,397	13
10	10	**First Chicago Corp.**	33,562,442	25,554,923	9	20,020,357	10	11,083	15
11	11	**Security Pacific Corp.** (Los Angeles)	32,999,142	23,446,393	10	21,521,100	8	26,441†	5
12	12	**Wells Fargo & Co.** (San Francisco)	23,219,189	16,853,927	12	16,936,490	12	18,190	8
13	13	**Crocker National Corp.** (San Francisco)	22,494,462	16,494,955	13	14,003,786	13	16,700	9
14	15	**Marine Midland Banks** (Buffalo)[4]	18,682,474	14,095,704	14	10,799,319	14	10,638†	16
15	16	**Mellon National Corp.** (Pittsburgh)	18,447,860	11,837,780	17	9,793,649	17	7,195†	25
16	14	**Irving Bank Corp.** (New York)	18,227,220	14,006,245	15	9,826,780	16	9,700	18
17	19	**Interfirst Corp.** (Dallas)[5]	17,318,000	12,559,000	16	9,851,000	15	7,064†	25
18	17	**First National Boston Corp.**	16,809,052	11,019,908	20	9,085,367	18	12,600	12
19	18	**Northwest Bancorp.** (Minneapolis)	15,141,380	11,386,218	18	8,639,829	19	13,600	10
20	20	**First Bank System** (Minneapolis)	14,911,285	11,022,734	19	7,842,799	20	10,036	17
21	22	**Texas Commerce Bancshares** (Houston)	14,511,591	10,528,654	22	7,682,156	22	6,874	28
22	21	**Republic of Texas Corp.** (Dallas)	14,441,096	10,086,276	23	7,781,972	21	6,684	30
23	23	**First City Bancorp. of Texas** (Houston)	14,291,097	10,859,113	21	7,347,617	23	7,489	23
24	24	**NBD Bancorp** (Detroit)[6]	12,144,873	8,655,694	24	5,600,915	26	6,723	29
25	25	**Bank of New York Co.**	11,462,995	8,079,888	26	6,925,465	25	8,042	19
26	26	**Seafirst Corp.** (Seattle)	10,747,100	8,149,026	25	7,017,109	24	7,967	20
27	27	**European American Bancorp** (New York)	8,145,537	5,865,999	27	5,206,979	27	4,479	40
28	28	**NCNB Corp.** (Charlotte)	7,724,381	5,223,402	29	3,757,687	33	5,018	36
29	31	**Republic New York Corp.**	7,706,891	5,250,941	28	2,814,992	44	2,500	50
30	30	**Harris Bankcorp.** (Chicago)	7,488,029	4,574,480	37	3,922,354	31	3,767	46
31	32	**Pittsburgh National Corp.**	6,934,537	4,440,775	40	3,457,991	36	3,577	48
32	29	**Union Bank** (Los Angeles)[7]	6,895,367	5,206,310	30	4,110,016	29	5,869	33
33	44	**Mercantile Texas Corp.** (Dallas)	6,870,165	4,720,714	36	4,270,835	28	4,429	41
34	34	**Southeast Banking Corp.** (Miami)	6,453,271	4,969,919	33	3,072,221	41	7,001	27
35	33	**Philadelphia National Corp.**	6,297,071	4,402,599	41	3,326,275	38	4,903	37
36	40	**Wachovia Corp.** (Winston-Salem)	6,265,890	4,487,701	38	3,274,998	40	6,183	31
37	35	**Northern Trust Corp.** (Chicago)	6,237,616	4,314,383	43	3,306,999	39	3,982	44
38	36	**Michigan National Corp.** (Bloomfield Hills, Mich.)	6,228,956	5,108,647	31	3,960,975	30	7,500	22
39	39	**DETROITBANK Corp.**	6,154,170	4,785,581	34	2,708,717	47	4,367	42
40	37	**Valley National Corp.** (Phoenix)[9]	6,136,387	5,027,252	32	3,839,038	32	7,224	24
41	38	**National Bank of North America** (New York)[10]	5,969,291	4,725,764	35	3,522,131	35	4,733	39
42	45	**Rainier Bancorp.** (Seattle)	5,619,372	4,318,239	42	3,454,298	37	5,570	35
43	47	**U.S. Bancorp.** (Portland, Ore.)	5,655,994	3,933,681	46	3,595,390	34	5,643	34
44	41	**Ameritrust Corp.** (Cleveland)	5,529,552	4,079,226	45	2,967,919	43	4,350	43
45	46	**BancOhio Corp.** (Columbus)	5,511,428	4,157,275	44	2,779,315	46	5,874	32
46	●	**Barnett Banks of Florida** (Jacksonville)	5,504,347	4,452,989	39	2,799,451	45	7,660	21
47	43	**National City Corp.** (Cleveland)	5,387,906	3,437,895	49	2,275,769	50	3,377	49
48	●	**Centerre Bancorp.** (St. Louis)[11]	5,334,777	3,537,043	47	2,653,266	48	3,586†	47
49	●	**First Union Corp.** (Charlotte)	5,296,955	3,260,594	50	2,644,421	49	4,800	38
50	42	**First Pennsylvania Corp.** (Philadelphia)	5,257,234	3,525,395	48	3,037,255	42	3,865	45
		TOTALS	**1,054,160,378**	**742,499,178**		**624,489,886**		**601,402**	

N.A. Not available.

●Not on last year's list.

[1] As of December 31, 1981.

[2] Net of unearned discount and loan loss reserve. Figure does not include direct lease financing.

[3] Named changed from Western Bancorp. on June 1, 1981.

[4] Company is 51% owned by Hongkong & Shanghai Banking Corp. (No. 29 among the 1980 Commercial-Banking companies outside the U.S.)

[5] Name changed from First International Bancshares on December 31, 1981.

[6] Name changed from National Detroit Corp. on May 1, 1981.

[7] Company is wholly owned by Standard Chartered Bank Ltd. (No. 46 among the 1980 Commercial-Banking companies outside the U.S.)

[8] Figure is for Michigan National Bank (Lansing).

[9] Name changed from Valley National Bank of Arizona on April 14, 1981.

NET INCOME		STOCKHOLDERS' EQUITY		NET INCOME AS PERCENT OF EQUITY		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
									GROWTH RATE: 1971-81		1981		1971-81 AVERAGE	
($000)	RANK	($000)	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK
445,443	2	4,090,644	2	10.9	36	3.02	4.38	1.33	8.55	28	(24.79)	46	5.89	31
531,000	1	4,281,000	1	12.4	28	4.20	4.02	1.55	10.48	19	10.40	30	4.67	37
412,150	3	2,717,699	3	15.2	12	11.56	10.15	4.43	10.07	23	18.40	19	5.54	34
252,117	6	1,900,287	5	13.3	21	7.48	6.87	2.86	10.09	22	17.08	21	6.47	28
347,700	4	2,420,000	4	14.4	18	8.44	8.33	3.13	10.43	20	10.12	31	7.88	20
254,623	5	1,710,692	6	14.9	13	6.44	5.75	2.06	12.07	13	11.93	29	10.99	10
215,039	8	1,501,625	8	14.3	20	13.06	11.05	5.22	9.60	25	36.67	3	7.35	24
236,113	7	1,597,834	7	14.8	14	5.83	5.70	1.98	11.40	14	4.83	35	10.03	12
187,980	10	1,180,558	11	15.9	7	6.89	8.65	2.52	10.58	18	15.71	23	9.77	13
118,709	16	1,271,861	10	9.3	43	2.98	1.59	1.79	5.23	40	30.89	11	5.02	35
206,446	9	1,323,202	9	15.6	9	7.05	6.55	2.13	12.71	10	24.80	15	11.93	9
123,988	14	1,020,932	13	12.1	29	5.33	5.33	1.59	12.86	9	(3.79)	42	7.53	22
62,901	29	1,040,059	12	6.0	48	4.02	6.76	3.48	1.45	46	(11.18)	44	5.66	33
81,279	23	819,335	19	9.9	41	4.24	3.89**	3.42	2.17	45	35.83	4	3.62	40
115,511	18	976,562	14	11.8	30	5.88	5.73	2.26	10.03	24	22.33	16	9.57	15
97,012	20	639,152	24	15.2	11	11.02	9.70	3.22	13.09	8	14.34	24	11.94	8
147,000	11	854,000	16	17.2	5	3.76	2.83	0.80	16.74	3	12.55	27	12.41	6
118,616	17	820,532	18	14.5	17	9.38	8.22	3.80	9.46	26	35.08	5	9.43	16
100,128	19	868,416	15	11.5	32	3.85	4.39	1.64	8.91	27	(12.21)	45	6.43	29
96,780	21	845,928	17	11.4	33	6.38	7.42	3.13	7.38	31	(6.44)	43	3.03	42
137,511	12	712,287	21	19.3	2	4.49	3.48	0.89	17.57	2	21.68	17	16.45	2
120,037	15	719,720	20	16.7	6	5.01	4.01	1.13	16.06	5	33.39	7	12.28	7
128,961	13	712,070	22	18.1	3	4.22	3.31	0.94	16.20	4	28.19	13	14.10	4
65,173	26	698,228	23	9.3	42	5.31	6.08	3.10	5.53	38	6.21	33	6.53	27
58,164	30	444,217	27	13.1	26	8.50	6.53‡	4.58	6.38	35	32.16	8	7.11	25
82,123	22	567,267	25	14.5	16	5.27	4.48	1.64	12.38	12	4.64	36	9.22	17
33,287	43	335,164	41	9.9	40	N.A.	N.A.	N.A.	—		—		—	
66,517**	25	432,384	28	15.4	10	3.22**	2.60	1.20	10.37	21	16.27	22	(0.58)	45
67,866	24	309,035	47	22.0	1	5.60	5.15	0.90	20.06	1	27.88	14	19.65	1
29,853	46	359,907	36	8.3	47	4.38	4.51	2.59	5.39	39	14.05	25	5.89	32
57,397	32	389,011	31	14.3	15	4.63	3.89	1.67	10.74	17	29.47	12	10.11	11
29,368	47	329,241	44	8.9	45	N.A.	N.A.	N.A.	—		—		—	
62,974	28	360,356	35	17.5	4	3.67	2.99	1.02	13.66	7	31.97	9	—	
49,285	35	373,840	34	13.2	23	3.15	3.23	1.60	7.01	33	(1.91)	40	1.03	44
35,679	40	351,663	38	10.1	39	6.13	6.89	4.38	3.42	44	3.16	37	4.19	39
51,842	34	395,334	30	13.1	25	3.23	3.08	1.99	4.96	42	49.23	1	3.55	41
35,155	41	318,249	45	11.0	34	7.31	6.51	3.49	7.67	30	17.87	20	4.68	36
37,866	39	344,944	40	11.0	35	3.51	3.72	1.56[8]	8.45	29	35.05	6	9.68	14
30,348	45	334,203	42	9.1	44	3.75	4.19	2.16	5.67	37	13.09	26	9.04	18
54,481	33	379,954	32	14.3	19	3.24	3.51	1.11	11.31	15	0.40	39	6.77	26
12,757	49	354,165	37	3.6	49	N.A.	N.A.	N.A.	—		—		—	
43,866	36	332,125	43	13.2	22	4.66	4.15	1.45	12.38	11	12.32	28	12.46	5
64,526	27	413,156	29	15.6	8	3.60	3.22	0.92	14.62	6	6.49	32	14.13	3
58,085	31	566,233	26	10.3	38	6.29	5.62	3.21	6.96	34	5.50	34	7.50	23
27,422	48	313,529	46	8.7	46	3.41	0.99	2.35	3.79	43	2.05	38	2.07	43
41,181	37	349,024	39	11.8	31	3.04	2.95	1.09	10.80	16	20.13	18	7.82	21
40,010	38	379,189	33	10.6	37	5.11	5.97	3.10	5.12	41	(2.94)	41	6.32	30
34,946	42	279,104	48	12.5	27	4.61	4.37	2.30	7.20	32	31.85	10	8.38	19
32,085**	44	243,638	49	13.2	24	3.43**	3.89	1.95	5.81	36	43.94	2	4.54	38
296**	50	216,612	50	0.1	50	0.02**	(10.47)	2.77	(38.93)	47	(30.59)	47	(16.52)	46
5,739,596		**44,194,167**												

[10] Company is wholly owned by National Westminster Bank (No. 8 among the 1980 Commercial-Banking companies outside the U.S.)

[11] Name changed from First Union Bancorp. on January 4, 1982

The 50 Largest LIFE-INSURANCE COMPANIES (ranked by assets)

RANK '81	RANK '80	COMPANY	ASSETS[1] ($000)	PREMIUM & ANNUITY INCOME[2] ($000)	PREMIUM & ANNUITY INCOME[2] RANK	NET INVESTMENT INCOME ($000)	NET INVESTMENT INCOME RANK
1	1	**Prudential** (Newark)*	62,498,540	9,935,180	1	3,744,666	2
2	2	**Metropolitan** (New York)*	51,757,845	5,131,318	2	3,855,375	1
3	3	**Equitable Life Assurance** (New York)*	36,758,160	2,400,771	8	2,223,669	3
4	4	**Aetna Life** (Hartford)[7]	25,158,904	4,440,322	3	1,504,769	4
5	5	**New York Life***	21,041,380	2,637,020	6	1,503,589	5
6	6	**John Hancock Mutual** (Boston)*	19,936,798	2,425,567	7	1,332,930	6
7	7	**Connecticut General Life** (Bloomfield)[18]	15,103,332	2,810,410	5	1,071,693	8
8	8	**Travelers** (Hartford)[8]	14,803,166	4,399,880	4	1,112,284	7
9	9	**Northwestern Mutual** (Milwaukee)*	12,154,318	1,244,436	12	840,946	10
10	10	**Teachers Insurance & Annuity** (New York)	11,439,344	1,791,958	9	1,017,409	9
11	11	**Massachusetts Mutual** (Springfield)*	10,022,231	1,224,967	14	669,255	11
12	13	**Bankers Life** (Des Moines)*	8,765,096	1,533,098	10	664,343	12
13	12	**Mutual of New York**	8,388,961	785,245	20	601,907	13
14	14	**New England Mutual** (Boston)	7,273,819	1,101,205	17	519,974	14
15	15	**Mutual Benefit** (Newark)*	6,619,044	1,158,830	16	476,141	15
16	16	**Connecticut Mutual** (Hartford)*	5,818,322	711,254	21	405,264	16
17	17	**Lincoln National Life** (Fort Wayne, Ind.)[9]	5,038,853	1,194,854	15	340,203	17
18	18	**Penn Mutual** (Philadelphia)*	3,963,402	398,408	31	262,773	19
19	19	**State Farm Life** (Bloomington, Ill.)	3,759,829	596,738	27	263,699	18
20	22	**Phoenix Mutual** (Hartford)*	3,352,372	617,779	23	227,054	[illegible]
21	20	**Continental Assurance** (Chicago)[10]	3,323,163	937,429	18	160,974	33
22	21	**Western & Southern** (Cincinnati)*	3,210,187	276,399	44	223,442	21
23	23	**National Life & Accident** (Nashville)	3,021,702	379,081	34	232,698	20
24	24	**Pacific Mutual** (Newport Beach, Calif.)*	2,984,715	685,603	22	212,831	23
25	30	**Nationwide Life** (Columbus, Ohio)	2,766,057	610,308	26	127,585	44
26	25	**Transamerica Occidental Life** (Los Angeles)[11]	2,601,874	1,236,876	13	159,828	34
27	28	**National Life** (Montpelier, Vt.)*	2,576,085	204,635	46	167,862	30
28	27	**Franklin Life** (Springfield, Ill.)[12]	2,569,738	272,263	45	191,761	24
29	29	**State Mutual of America** (Worcester, Mass.)	2,551,755	466,429	28	187,586	25
30	26	**American National** (Galveston)	2,520,231	371,059	35	177,098	28
31	34	**Union Mutual** (Portland, Me.)	2,148,510	417,756	29	177,985	27
32	41	**IDS Life** (Minneapolis)[13]	2,063,810	307,124	38	168,559	29
33	31	**Guardian of America** (New York)*	2,054,354	395,647	32	161,128	32
34	39	**Aetna Life & Annuity** (Hartford)[7]	2,036,236	415,168	30	108,766	48
35	43	**Variable Annuity Life** (Houston)[14]	2,034,997	358,489	36	165,283	31
36	32	**Provident Mutual** (Philadelphia)*	2,027,531	196,927	47	140,927	38
37	33	**Home Life** (New York)*	1,992,716	303,557	41	135,694	40
38	35	**Provident Life & Accident** (Chattanooga)	1,951,240	801,686	19	128,064	42
39	37	**Minnesota Mutual Life** (St. Paul)	1,933,112	386,693	33	127,633	43
40	38	**United of Omaha Life** (Omaha)	1,932,884	305,048	39	148,495	36
41	40	**General American Life** (St. Louis)*	1,929,053	611,744	25	141,536	37
42	36	**Southwestern Life** (Dallas)[15]	1,829,674	281,352	43	135,838	39
43	44	**Northwestern National** (Minneapolis)	1,714,446	343,255	37	111,082	46
44	47	**Liberty National** (Birmingham, Ala.)	1,665,575	282,237	42	101,260	50
45	42	**Anchor National** (Los Angeles)	1,656,872	171,187	49	178,278	26
46	46	**Capitol Life** (Denver)[16]	1,648,060	1,273,990	11	151,073	35
47	45	**Jefferson Standard** (Greensboro, N.C.)	1,645,171	149,089	50	129,553	41
48	49	**American United Life** (Indianapolis)*	1,582,701	303,868	40	125,385	45
49	48	**Life Insurance of Virginia** (Richmond)	1,542,040	175,903	48	109,895	47
50	●	**Allstate Life** (Northbrook, Ill.)[17]	1,432,488	614,575	24	106,661	49
		TOTALS	**398,600,695**	**60,074,619**		**27,256,703**	

Data for all companies are on the "statutory" accounting basis required by state insurance regulatory authorities.

●Not on last year's list

*A mutual company

N.A. Not available

[1] As of December 31, 1981

[2] Includes premium income from life, accident, and health policies, from annuities, and from contributions to deposit administration funds.

[3] After dividends to policyholders and federal income taxes, excluding capital gains and losses. Figures in parentheses indicate a loss.

[4] Face value of life policies as of December 31, 1981.

[5] Change between December 31, 1980, and December 31, 1981.

[6] Includes home office, field force, and full-time agents.

[7] Company is wholly owned by Aetna Life & Casualty (No. 2 on the Diversified Financial list).

[8] Company is wholly owned by Travelers Corp. (No. 4 on the Diversified Financial list).

NET GAIN FROM OPERATIONS[3]			LIFE INSURANCE IN FORCE[4]		INCREASE IN LIFE INSURANCE IN FORCE[5]				EMPLOYEES[6]	
($000)	MUTUAL	STOCK	($000)	RANK	($000)	RANK	PERCENT OF INCREASE	RANK	NUMBER	RANK
34,100	11		456,174,632	1	49,602,809	2	12.2	30	62,817	1
371,426	1		393,590,726	2	44,398,406	3	12.7	27	44,000	2
79,622	5		223,874,676	3	26,536,418	4	13.4	23	26,485	4
224,435		1	163,873,853	4	19,659,044	5	13.6	22	16,690	7
193,901	2		137,456,394	6	14,692,100	6	12.0	31	18,755	6
119,546	3		145,609,204	5	11,905,725	9	8.9	39	20,424	5
158,671		3	90,809,773	9	10,407,000	10	13.0	24	14,909	9
159,168		2	116,498,216	8	12,095,867	8	11.6	32	41,234	3
101,550	4		70,133,741	11	8,825,280	11	14.4	20	6,798	17
5,056		23	9,072,396	45	1,485,321	33	19.6	10	1,897	40
77,532	6		55,978,807	13	5,044,010	21	9.9	36	10,428	11
10,340	20		42,680,898	17	7,629,688	12	21.8	8	6,266	18
14,920	18		42,827,888	16	4,859,234	22	12.8	26	8,055	12
35,235	10		34,991,635	19	3,319,000	28	10.0	35	7,913	13
39,924	8		46,732,485	14	6,491,304	15	16.1	14	5,631	21
38,907	9		29,553,555	24	3,330,154	27	12.7	28	4,878	23
42,665		12	72,627,629	10	12,696,157	7	21.2	9	5,490	22
27,826	12		19,407,860	28	1,346,269	37	7.5	40	3,965	26
91,552		4	58,479,552	12	7,523,614	13	14.8	16	16,336	8
(4,276)	25		33,513,245	20	4,453,490	23	15.3	15	3,322	31
3,632		25	28,804,867	26	1,013,435	41	3.6	47	N.A.	
53,935	7		15,282,409	36	866,504	43	6.0	43	7,525	15
87,913		5	17,836,947	31	1,197,922	39	7.2	41	7,373	16
24,992	13		19,096,246	29	514,656	47	2.8	48	3,221	32
7,898		22	14,913,866	38	1,311,350	38	9.6	37	6,158	20
31,773		16	123,624,304	7	55,658,623	1	81.9	3	6,202	19
6,307	24		11,296,384	43	752,935	44	7.1	42	2,330	37
77,284		6	16,419,411	34	920,423	42	5.9	44	3,376	30
16,880	17		16,813,247	33	2,340,502	30	16.2	13	2,878	34
49,887		11	17,516,380	32	693,328	45	4.1	45	7,714	14
6,907	23		5,716,330	48	636,931	46	12.5	29	2,417	36
16,878		18	11,552,183	42	1,469,436	34	14.6	18	3,704	28
9,778	21		21,263,037	27	2,059,979	31	10.7	34	3,592	29
14,801		20	3,513,443	49	3,513,123	26	850.9	1	1,601	43
8,888		21	6	50		50		50	766	46
17,462	16		12,820,705	39	1,458,810	35	12.8	25	2,224	38
20,524	14		16,391,786	35	1,371,626	36	9.1	38	2,800	35
50,803		10	38,499,425	18	5,360,134	19	16.2	12	3,997	25
18,992	15		43,481,070	15	5,542,079	17	14.6	17	3,881	27
16,815		19	32,479,702	21	6,710,155	14	26.0	5	11,981	10
13,350	19		29,125,272	25	5,389,571	18	22.7	7	2,998	33
58,357		7	10,760,632	44	1,071,263	40	11.1	33	1,800	42
22,458		17	29,620,507	23	3,753,101	24	14.5	19	1,843	41
37,401		13	11,735,700	40	450,261	48	4.0	46	4,084	24
3,777		24	7,272,207	46	2,604,847	29	55.8	4	453	47
57,628		8	11,578,125	41	5,663,492	16	95.8	2	353	48
52,486		9	6,714,715	47	151,976	49	2.3	49	1,471	44
8,854	22		17,849,566	30	3,612,755	25	25.4	6	1,237	45
36,914		14	15,014,010	37	1,848,413	32	14.0	21	2,091	39
34,229		15	32,307,691	22	5,093,271	20	18.7	11	N.A.	
2,689,903			**2,883,187,340**		**379,331,791**				**426,363**	

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[9] Company is wholly owned by Lincoln National (No. 12 on the Diversified Financial list).

[10] Company is 84% owned by Loews (No. 10 on the Diversified Financial list).

[11] Company is wholly owned by Transamerica (No. 13 on the Diversified Financial list).

[12] Company is wholly owned by American Brands (No. 96 on the FORTUNE 500).

[13] Company is wholly owned by Alleghany (No. 35 on the Diversified Financial list).

[14] Company is wholly owned by American General (No. 15 on the Diversified Financial list).

[15] Company is wholly owned by Tenneco (No. 16 on the FORTUNE 500).

[16] Company is wholly owned by Gulf & Western Industries (No. 61 on the FORTUNE 500).

[17] Wholly owned by Sears Roebuck (No. 1 on the Retailing list).

[18] Company merged with INA (No. 7 on the Diversified Financial list) to form CIGNA on March 31, 1982.

The 50 Largest DIVERSIFIED FINANCIAL COMPANIES (ranked by assets)

RANK '81	RANK '80	COMPANY	ASSETS[1] ($000)	REVENUES[2] ($000)	REVENUES[2] RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
1	1	**Federal National Mortgage Assn.** (Washington, D.C.)	62,095,903	5,861,559	4	(190,370)	50	1,243,250	12
2	2	**Aetna Life & Casualty** (Hartford)	39,630,600	13,531,900	1	462,200	3	3,443,300	1
3	4	**American Express** (New York)	25,103,000	7,211,000	3	518,000	1	2,661,000	3
4	3	**Travelers** (Hartford)	23,982,300	9,800,800	2	360,100	5	2,812,800	2
5	5	**Merrill Lynch & Co.** (New York)	17,682,251	4,038,182	8	202,874	9	1,163,907	14
6	6	**H.F. Ahmanson** (Los Angeles)	15,048,826	1,564,248	20	(51,307)**	48	774,859	21
7	7	**INA** (Philadelphia)[3]	11,028,906	5,162,258	5	475,205	2	2,090,908	4
8	8	**Great Western Financial** (Beverly Hills)	10,646,435	1,173,973	28	(15,420)**	38	624,272	25
9	18	**First Boston** (New York)	10,314,389	291,536	41	46,286	27	198,550	34
10	10	**Loews** (New York)	9,914,071	4,776,219	6	253,213	6	1,356,641	9
11	9	**First Charter Financial** (Beverly Hills)	9,750,034	1,003,800	30	(55,654)	49	718,705	23
12	12	**Lincoln National** (Fort Wayne, Ind.)	9,047,291	3,002,684	11	128,104	16	1,337,523	10
13	11	**Transamerica** (San Francisco)	9,042,342	4,155,887	7	223,336	7	1,598,046	7
14	14	**Imperial Corp. of America** (San Diego)[4]	8,500,000	877,247	34	(37,754)	46	458,354	27
15	15	**American General** (Houston)	8,075,700	2,387,700	14	163,900	13	1,168,800	13
16	13	**Continental** (New York)	8,071,934	3,466,227	9	217,532	8	2,075,195	5
17	16	**American International Group** (New York)	7,957,455	3,154,921	10	363,194	4	1,964,082	6
18	17	**Beneficial** (Wilmington)	6,340,200	1,466,100	22	(7,700)	36	878,500	19
19	20	**Walter E. Heller International** (Chicago)	6,256,699	915,868	33	22,649**	28	348,771	30
20	19	**Avco** (Greenwich, Conn.)[5]	6,062,848	2,416,319	13	70,012	24	1,025,333	16
21	22	**Household Finance** (Prospect Heights, Ill.)[6]	5,927,300	961,300	32	141,200	15	1,374,700	8
22	23	**Hutton (E.F.) Group** (New York)	5,637,885	1,444,008	23	78,812	23	335,159	31
23	21	**Golden West Financial** (Oakland, Calif.)	5,541,347	624,084	36	(19,157)	40	177,227	35
24	39	**Baldwin-United** (Cincinnati)	4,957,339	2,492,049	12	85,490	21	325,668	32
25	31	**Donaldson Lufkin & Jenrette** (New York)	4,868,026	295,920	40	13,225	31	107,043	41
26	24	**Gibraltar Financial Corp. of Calif.** (Beverly Hills)	4,771,371	484,634	37	(47,342)**	47	144,577	37
27	26	**U.S. Fidelity & Guaranty** (Baltimore)	4,748,310	2,336,648	15	167,117	12	1,334,809	11
28	25	**St. Paul Companies**	4,599,932	1,971,173	17	144,575	14	1,091,427	15
29	34	**Bache Group** (New York)[7]	4,504,000	736,933	35	5,365	32	382,609	29
30	28	**General Re** (Greenwich, Conn.)	4,168,300	1,423,100	25	179,600	10	968,400	17
31	27	**Crum & Forster** (New York)	4,160,108	1,925,085	18	175,993	11	923,390	18
32	●	**Financial Corp. of America** (Los Angeles)	3,839,352	396,819	38	21,032	29	94,206	43
33	32	**American Financial** (Cincinnati)	3,797,788	1,476,577	21	66,500**	26	132,348	38
34	35	**Kemper** (Long Grove, Ill.)	3,789,361	2,076,144	16	83,310	22	601,729	26
35	33	**Alleghany** (New York)	3,610,274	1,374,095	27	68,131	25	294,409	33
36	●	**Capital Holding Co.** (Louisville)	3,559,995	1,003,386	31	94,475	20	749,738	22
37	41	**City Federal Savings & Loan Assn.** (Elizabeth, N.J.)	3,347,025	328,665	39	(1,365)	33	97,225	42
38	30	**Paine Webber** (New York)[8]	3,205,798	1,027,095	29	15,882	30	124,445	39
39	36	**Chubb** (New York)	2,912,384	1,408,500	26	103,984	18	663,258	24
40	38	**SAFECO** (Seattle)	2,706,370	1,435,564	24	111,673	17	854,909	20
41	37	**Reliance Group** (New York)	2,631,138	1,610,950	19	98,462	19	404,066	28
42	40	**Financial Federation** (Los Angeles)	2,455,617	235,165	43	(32,024)	45	155,823	36
43	●	**American Savings** (Salt Lake City)	2,328,315	228,564	44	(23,481)	42	80,856	45
44	45	**American Savings & Loan Assn. of Florida** (Miami)[9]	2,225,894	243,912	42	(7,665)	35	51,323	47
45	47	**Western Financial** (Phoenix)	2,180,672	225,525	45	(25,526)	43	49,204	49
46	44	**TRANSOHIO Financial** (Cleveland)	2,098,480	206,204	47	(19,322)	41	84,635	44
47	48	**Financial Corp. of Santa Barbara**	2,056,818	193,278	48	(30,166)	44	48,821	50
48	46	**Northern California Savings & Loan** (Palo Alto)	1,933,775	208,020	46	(15,408)	37	107,344	40
49	50	**Broadview Financial** (Cleveland)	1,843,860	183,971	49	(19,071)	39	49,498	48
50	●	**Guarantee Financial Corp. of Calif.** (Fresno)	1,693,073	178,675	50	(6,945)	34	62,283	46
		TOTALS	**410,651,641**	**104,994,471**		**4,555,154**		**39,813,925**	

N.A. Not available

●Not on last year's list

[1] Total assets shown as of December 31, 1981, unless otherwise noted. Only assets of consolidated subsidiaries are included. Holding companies that own commercial banks or life-insurance companies are listed here only when these subsidiaries represent less than 80% of assets.

[2] Total income during the year, including any consolidated non-financial revenues from manufacturing, retailing, etc., and revenues from discontinued operations when published. All companies on the list must have derived more than 50% of their revenues from two or more kinds of financial business and be publicly held.

[3] INA merged with Connecticut General to form CIGNA Corp. on March 31, 1982.

[4] Figures include those of Gibraltar Savings Association, which was spun off on December 30, 1981.

[5] Figures are for fiscal year ending November 30, 1981.

[6] Wholly owned by Household International.

[7] Wholly owned by Prudential. (No. 1 on the 1981 Life-Insurance list)

[8] Figures are for fiscal year ending September 25, 1981.

[9] Figures are for fiscal year ending September 30, 1981.

NET INCOME AS PERCENT OF EQUITY		EMPLOYEES		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS*			
							GROWTH RATE 1971-81		1981		1971-81 AVERAGE	
%	RANK	NUMBER	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK
		1,082	41	(3.22)	0.24	1.43	—		(25.06)	34	(5.28)	39
13.4	19	40,300	3	5.75	6.96	1.68	13.09	13	30.80	11	12.37	7
19.5	9	57,400	2	5.58	5.27	1.44	14.51	11	14.60	20	3.38	28
12.8	22	30,000	5	8.47	8.56	2.62	12.45	15	20.27	15	6.20	21
17.4	14	36,481	4	5.14	5.51	2.27	8.52	21	(7.54)	30	3.77	27
		4,280	30	(2.16)**	2.34	N.A.	—		(16.26)	31	—	
22.7	7	25,916	9	11.80	7.47	2.81	15.43	8	14.87	19	8.66	13
		2,310	33	(0.68)**	1.74	1.37	—		(17.41)	32	0.67	31
23.3	5	1,627	37	8.35	6.17	3.95	7.77	22	36.45	7	7.29	19
18.7	11	28,150	6	19.79	16.70	4.48	16.02	7	8.83	23	10.57	10
		2,350	32	(1.87)	1.32	1.36	—		(19.53)	33	(3.60)	38
9.6	29	12,602	16	5.90	8.10	2.90	7.36	23	9.06	22	4.86	22
14.0	17	26,400	7	3.45	3.75	0.92	14.13	12	31.67	10	8.72	12
		1,800	36	(2.66)	2.86	1.38	—		(36.32)	38	4.34	25
14.0	16	8,490	25	6.42	9.06	1.21	18.16	6	16.10	17	12.24	8
10.5	27	21,142	11	4.27	5.24	2.60	5.09	24	19.28	16	9.38	11
18.5	13	22,300	10	6.33	5.03	0.78	23.29	2	30.27	12	12.75	6
		16,800	12	(1.11)	3.45	3.37	—		1.13	27	(1.38)	33
6.5	31	4,884	29	1.87**	3.61	1.88	(0.05)	27	0.24	28	(0.46)	32
6.8	30	26,055	8	3.14	6.56	1.02‡	11.90	17	(26.45)	35	4.09	26
10.3	28	73,653	1	2.66	2.88	2.12	2.30	26	3.77	26	(1.50)	34
23.5	4	11,861	17	4.31	4.93	N.A.	—		51.55	4	—	
		1,432	38	(0.93)	1.80	0.37	—		(42.15)	39	6.57	20
26.3	2	14,500	13	8.35	6.40	1.20	21.41	3	(0.62)	29	23.41	2
12.4	26	3,866	31	1.26	0.97	0.80	4.65	25	87.61	1	8.40	14
		1,200	40	(3.43)**	(0.57)	0.52	—		(48.49)	42	(1.54)	35
12.5	25	8,775	24	5.94	7.99	1.88	12.19	16	4.96	24	11.69	9
13.2	20	9,314	23	6.90	5.90	2.36	11.33	18	32.11	8	7.86	16
1.4	32	9,700	21	N.A.	2.82	(0.47)	—		—		—	
18.5	12	2,104	34	8.23	7.11	1.40	19.38	5	54.58	3	8.05	15
19.1	10	9,782	19	6.15	5.04	1.53	14.93	9	25.25	13	13.53	5
22.3	8	1,027	43	2.37	1.73	(0.17)‡	—		59.94	2	25.25	1
50.2	1	13,000	15	N.A.	2.64	0.88**	—		—		—	
13.8	18	13,500	14	6.34	7.03	1.95	12.51	14	4.48	25	7.75	17
23.1	6	5,161	28	6.47	3.91	0.56	27.72	1	50.22	5	18.75	4
12.6	24	8,129	26	3.40	3.07	0.87	14.60	10	32.11	9	2.95	30
		4,875	35	(0.45)	N.A.	N.A.	—		—		—	
12.8	23	9,730	20	1.70	(1.32)	N.A.	—		13.52	21	—	
15.7	15	7,800	27	8.45	6.66	2.92	11.21	19	23.24	14	4.65	23
13.1	21	10,600	18	5.88	4.79	2.31	9.79	20	14.88	18	7.63	18
24.4	3	9,500	22	13.73	12.51	1.98	21.37	4	36.64	6	20.35	3
		583	50	(7.61)	0.70	1.32	—		(55.75)	46	2.95	29
		1,399	39	(9.72)	1.94	1.21	—		—		—	
		904	44	(2.99)	2.98	N.A.	—		(52.75)	45	—	
		1,058	42	(11.81)	1.35	1.57	—		(49.95)	43	(2.74)	36
		683	48	(5.13)	0.75	1.33	—		(27.09)	36	—	
		850	45	(6.98)	0.08	1.03	—		(51.00)	44	3.35	37
		776	46	(3.00)	0.71	1.28	—		(45.66)	41	4.40	24
		689	47	(6.41)	(0.73)	N.A.	—		(43.76)	40	—	
		680	49	(2.35)	1.87	N.A.	—		(35.62)	37	—	
		604,500										

The 50 Largest RETAILING COMPANIES (ranked by sales)

RANK '81	RANK '80	COMPANY	SALES[1] ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
1	1	**Sears Roebuck** (Chicago)[2]	27,357,400	34,509,400	1	650,100	1	8,268,900	1
2	2	**Safeway Stores** (Oakland)[2]	16,580,318	3,690,404	6	114,556	13	1,110,754	9
3	3	**K mart** (Troy, Mich.)	16,527,012	6,673,004	2	220,251	5	2,455,594	3
4	4	**J.C. Penney** (New York)	11,860,169	6,216,000	3	386,809	2	2,933,205	2
5	5	**Kroger** (Cincinnati)[2]	11,266,520	2,405,290	10	128,045	10	807,471	11
6	6	**F.W. Woolworth** (New York)[2]	7,223,241	3,141,965	7	81,870	21	1,372,182	6
7	8	**Lucky Stores** (Dublin, Calif.)	7,201,404	1,524,444	17	95,452	15	491,127	22
8	9	**American Stores** (Salt Lake City)	7,096,590	1,356,328	21	64,552	24	289,593	30
9	10	**Federated Department Stores** (Cincinnati)	7,067,673	4,096,877	5	258,508	4	1,986,052	4
10	7	**Great Atlantic & Pacific Tea** (Montvale, N.J.)[4]	6,989,529	1,308,983	23	(43,049)	49	403,786	26
11	12	**Winn-Dixie Stores** (Jacksonville)[5]	6,200,167	924,776	28	95,395	16	467,195	23
12	11	**Montgomery Ward** (Chicago)[2,6]	5,742,491	4,116,593	4	(124,120)	50	1,649,873	5
13	13	**Southland** (Dallas)[2]	5,693,636	1,677,791	14	94,191	17	615,021	16
14	15	**Jewel Companies** (Chicago)	5,107,614	1,379,871	20	101,670	14	555,750	19
15	14	**Household Merchandising** (Des Plaines, Ill.)[2,7,8]	5,079,932	1,354,299	22	53,262	27	511,667	20
16	16	**Dayton Hudson** (Minneapolis)	4,942,859	2,555,168	9	173,420	6	1,192,681	8
17	18	**Grand Union** (Elmwood Park, N.J.)[9]	3,626,231	781,449	29	34,327	34	228,207	35
18	19	**Albertson's** (Boise)	3,480,570	709,847	31	48,478	29	238,792	34
19	17	**May Department Stores** (St. Louis)	3,413,204	2,387,583	11	126,203	11	953,895	10
20	23	**Supermarkets General** (Woodbridge, N.J.)	2,999,379	636,777	35	30,256	37	167,291	39
21	21	**ARA Services** (Philadelphia)[10]	2,915,876	1,137,778	24	53,082**	28	494,045	21
22	22	**Carter Hawley Hale Stores** (Los Angeles)	2,870,735	1,741,722	13	44,762	31	647,039	15
23	27	**Allied Stores** (New York)	2,760,867	2,179,328	12	88,332	18	797,979	12
24	26	**Melville** (Harrison, N.Y.)[2]	2,760,842	1,134,254	25	136,133	9	607,945	17
25	31	**Associated Dry Goods** (New York)	2,751,200	1,557,478	16	69,774	23	717,952	13
26	24	**R.H. Macy** (New York)[11]	2,656,689	1,479,467	18	119,632	12	686,983	14
27	29	**Dillon Companies** (Hutchinson, Kans.)[5]	2,494,577	497,581	38	41,688	33	186,107	38
28	28	**McDonald's** (Oak Brook, Ill.)[2]	2,477,229	2,899,322	8	264,834	3	1,370,667	7
29	25	**Rapid-American** (New York)	2,457,140	1,567,444	15	6,955	48	70,259	48
30	33	**Wal-Mart** (Bentonville, Ark.)	2,449,997	937,513	26	82,794	20	322,734	29
31	30	**Stop & Shop Companies** (Boston)	2,168,148	468,578	40	24,531	39	151,489	40
32	32	**Marriott** (Washington, D.C.)[2]	2,000,314	1,454,876	19	86,136	19	421,729	25
33	41	**Sigmor** (San Antonio)[5]	1,835,363	495,216	39	31,823	36	202,804	36
34	34	**Zayre** (Framingham, Mass.)	1,797,139	643,444	34	22,147	41	199,232	37
35	35	**Jack Eckerd** (Clearwater, Fla.)[12]	1,752,550	643,935	33	78,510	22	466,062	24
36	37	**Walgreen** (Deerfield, Ill.)[13]	1,743,471	521,041	36	42,127	32	250,503	32
37	39	**Tandy** (Fort Worth)[5]	1,691,373	936,545	27	169,602	7	571,863	18
38	38	**Fisher Foods** (Bedford Heights, Ohio)[2]	1,492,709	222,299	49	21,333‡	42	85,066	47
39	43	**Giant Food** (Washington, D.C.)[4]	1,483,476	339,542	46	18,308	43	121,314	43
40	42	**Waldbaum** (Central Islip, N.Y.)[2]	1,375,787	240,964	47	10,376	46	86,662	46
41	47	**Revco D.S.** (Twinsburg, Ohio)[14]	1,310,404	447,652	42	45,129	30	248,950	33
42	46	**Mercantile Stores** (Wilmington)	1,269,491	711,370	30	57,895	26	397,026	27
43	40	**First National Supermarkets** (Maple Heights, Ohio)[3]	1,230,173	194,981	50	10,042**	47	44,036	49
44	45	**Pantry Pride** (Ft. Lauderdale)[11,15]	1,225,263	223,169	48	150,154**	8	11,642	50
45	50	**Marshall Field** (Chicago)	1,193,961	680,758	32	29,191	38	324,471	28
46	●	**Pneumo** (Boston)[16]	1,093,611	370,716	44	18,027	44	103,208	45
47	●	**U.S. Shoe** (Los Angeles)	1,087,982	519,993	37	58,761	25	283,256	31
48	●	**SCOA Industries** (Columbus, Ohio)	1,057,573	373,080	43	32,109	35	147,301	41
49	●	**Thrifty** (Los Angeles)[13]	1,054,418	352,774	45	17,752	45	118,570	44
50	●	**Service Merchandise** (Nashville)[2]	1,027,093	453,555	41	23,069	40	142,194	42
		TOTALS	**220,941,390**	**106,873,224**		**4,445,184**		**36,978,124**	

N.A. Not available.

●Not on last year's list

[1] Net sales include all operating revenues and revenues from discontinued operations when they are published. All figures are for the fiscal year ending January 31, 1982, unless otherwise noted. Sales of subsidiaries are included when they are consolidated.

[2] Figures are for fiscal year ending December 31, 1981.

[3] Figure is for Skaggs.

[4] Figures are for fiscal year ending February 28, 1981.

[5] Figures are for fiscal year ending June 30, 1981.

[6] Company is wholly owned by Mobil (No. 2 on the FORTUNE 500).

[7] Company is wholly owned by Household International.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		SALES		EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE	
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK
337,400	1	2.4	21	7.9	46	2.06	1.92	1.78	1.47	40	14.67	27	(6.79)	41
157,411	4	0.7	47	10.3	41	4.39	4.57	3.15	3.37	39	(4.57)	37	2.54	28
280,000	2	1.3	34	9.0	45	1.75	2.07	0.85	7.49	35	(6.57)	40	(5.13)	39
187,000	3	3.3	15	13.2	34	5.50	3.33	2.46	8.38	33	29.62	19	(5.22)	40
127,271	7	1.1	38	15.9	25	4.51	3.41	1.21‡	14.06	20	26.77	21	11.55	10
139,800	5	1.1	39	6.0	48	2.64	5.30	2.31	1.34	42	(20.01)	44	(2.32)	36
66,000	14	1.3	35	19.4	14	1.88	1.80	0.83	8.52	32	(5.84)	38	3.28	27
64,000	16	0.9	44	22.3	8	5.42	4.11	0.69[3]	22.89	8	41.77	9	9.68	12
120,800	8	3.7	11	13.0	35	5.33	5.74	2.20	9.25	30	32.87	16	0.43	33
60,000	19					(1.35)	(0.15)	2.02	—		(26.12)	46	(14.44)	44
63,000	17	1.5	31	20.4	12	3.67	3.42	1.30	10.94	29	21.53	24	6.67	19
95,900	10					N.A.	N.A.	N.A.			—		—	
49,600‡	23	1.7	28	15.3	27	3.98	3.29	1.03	14.47	19	59.98	5	5.01	24
36,922	27	2.0	23	18.3	16	8.03	4.76	2.41	12.79	24	16.89	26	4.60	26
59,900	20	1.0	41	10.4	40	N.A.	N.A.	N.A.	—		—		—	
70,000†	12	3.5	12	14.5	32	3.62	3.08	0.76	16.89	16	41.82	8	9.25	14
36,000	28	0.9	43	15.0	29	N.A.	N.A.	N.A.	—		—		—	
30,300	31	1.4	33	20.3	13	3.14	2.70	0.41	22.58	9	35.12	14	20.73	5
68,000	13	3.7	10	13.2	33	4.31	4.01	1.82	9.00	31	0.61	35	1.82	31
30,000	32	1.0	42	18.1	18	3.61	3.13	1.18	11.83	26	8.63	32	2.43	29
108,000	9	1.8	24	10.7	39	4.70**	3.61‡	2.63	5.98	37	(8.05)	41	(9.52)	42
55,000‡	22	1.6	30	6.9	47	1.55	2.11	1.63	(0.50)	43	(11.23)	42	(2.28)	35
65,000‡	15	3.2	16	11.1	38	4.38	4.11	1.18	14.01	21	33.41	15	10.59	11
56,938	21	4.9	5	22.4	7	5.26	4.54	1.04	17.60	14	13.82	29	6.11	21
60,000	18	2.5	18	9.7	43	4.17	3.86	2.86	3.84	38	6.95	33	(2.82)	37
46,000	24	4.5	7	17.4	20	7.35	6.48	1.57	16.69	17	28.68	20	9.54	13
24,000†	37	1.7	27	22.4	6	2.46	1.62	0.42	19.34	12	64.55	4	14.24	8
136,000	6	10.7	2	19.3	15	6.54	5.49	0.69	25.22	7	36.05	13	6.17	20
45,000	25	0.3	48	9.9	42	2.03	3.55	3.08**	(4.08)	44	—		—	
43,000	26	3.4	14	25.7	3	2.50	1.73	0.12	35.48	2	41.31	10	24.59	3
26,000	35	1.1	40	16.2	24	6.06	3.01	0.90	21.01	11	52.50	7	8.41	15
81,800	11	4.3	9	20.4	11	3.21	2.61	0.45	21.71	10	10.28	31	5.04	23
5,725	49	1.7	25	15.7	26	1.90	2.87	N.A.	—		(15.44)	43	—	
32,000	29	1.2	37	14.1	37	4.05	3.42	2.06	6.99	36	37.09	11	(2.15)	34
27,900	33	4.5	8	16.8	21	2.19	1.95	0.54	15.03	18	14.56	28	4.71	25
31,000	30	2.4	20	16.8	22	5.82	5.12	1.65	13.43	22	31.03	18	12.35	9
26,000	36	10.0	3	29.7	2	1.65	1.12	0.08	35.34	3	36.71	12	32.54	1
4,400	50	1.4	32	25.1	4	3.47‡	1.05	1.16	11.58	27	75.68	1	2.36	30
14,100	42	1.2	36	15.1	28	3.74	3.64	1.28	11.32	28	19.85	25	7.64	17
6,000	48	0.8	46	12.0	36	3.98	4.15	1.22	12.55	25	23.21	23	5.14	22
21,000	39	3.4	13	18.1	17	2.21	1.92	0.40	18.64	13	24.18	22	7.89	16
18,500	40	4.6	6	14.6	31	9.82	7.20	2.93	12.86	23	69.31	3	1.13	32
13,500	44	0.8	45	22.8	5	2.52**	1.24	N.A.	—		(24.69)	45	—	
7,500	47	12.3	1	289.8	1	19.72**	3.06	1.49	29.47	5	6.33	34	(9.67)	43
26,180	34	2.4	19	9.0	44	2.40	1.93	2.08	1.44	41	(6.13)	39	(2.86)	38
9,254	45	1.6	29	17.5	19	3.81	2.90	0.33	27.71	6	(3.25)	36	22.77	4
23,000	38	5.4	4	20.7	10	5.33	3.09	1.09	17.20	15	72.83	2	15.07	7
17,000	41	3.0	17	21.8	9	2.16	1.90	0.16	29.73	4	55.14	6	27.34	2
14,000	43	1.7	26	15.0	30	1.80	1.50	0.84	7.92	34	32.60	17	6.71	18
8,900‡	46	2.2	22	16.2	23	1.82	1.61	0.07	38.52	1	12.90	30	17.32	6
3,132,001														

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[8] Name changed from City Products on September 30, 1981

[9] Figures are for fiscal year ending March 31, 1981

[10] Figures are for fiscal year ending October 2, 1981

[11] Figures are for fiscal year ending July 31, 1981

[12] Figures are for fiscal year ending August 1, 1981

[13] Figures are for fiscal year ending August 31, 1981

[14] Figures are for fiscal year ending May 31, 1981

[15] Name changed from Food Fair on August 1, 1981

[16] Figures are for fiscal year ending November 30, 1981

The 50 Largest TRANSPORTATION COMPANIES (ranked by operating revenues)

RANK		COMPANY	OPERATING REVENUES[1] ($000)	ASSETS		NET INCOME[2]		STOCKHOLDERS' EQUITY	
'81	'80			($000)	RANK	($000)	RANK	($000)	RANK
1	3	**CSX** (Richmond, Va.)	5,432,200	8,066,900	1	367,700	1	3,151,600	1
2	2	**Trans World** (New York)	5,265,468	3,396,758	8	61,568**	18	809,868	13
3	1	**UAL** (Elk Grove, Ill.)	5,141,174	3,975,777	5	(70,530)	48	1,094,670	7
4	6	**Burlington Northern** (Seattle)	4,935,823	5,673,536	2	272,163	6	2,628,981	2
5	4	**United Parcel Service** (Greenwich, Conn.)	4,748,294	1,755,181	19	327,780	2	878,532	11
6	7	**American Airlines** (Dallas-Fort Worth)	4,108,699	3,738,221	6	47,440**	23	731,199	15
7	5	**Pan American World Airways** (New York)	3,797,291	2,963,184	12	(18,875)	42	786,700	14
8	8	**Eastern Air Lines** (Miami)	3,727,093	2,934,519	13	(65,877)	47	350,194	22
9	10	**Delta Air Lines** (Atlanta)[4]	3,533,326	2,304,327	17	146,474	14	1,040,611	9
10	9	**Santa Fe Industries** (Chicago)	3,366,900	4,677,800	4	242,200	8	2,471,500	3
11	11	**Southern Pacific** (San Francisco)	3,272,378	5,500,829	3	167,671	13	2,291,244	4
12	12	**Missouri Pacific** (St. Louis)	2,523,770	3,037,772	10	194,287	12	1,047,051	8
13	14	**Northwest Airlines** (St. Paul)	1,854,290	1,492,381	21	10,460	36	832,510	12
14	16	**Norfolk & Western Railway** (Roanoke)	1,801,655	3,191,510	9	291,063	3	1,814,028	5
15	15	**Southern Railway** (Washington, D.C)	1,790,669	3,452,306	7	212,080	10	1,488,660	6
16	17	**Tiger International** (Los Angeles)	1,673,350	2,702,397	14	(16,613)	40	419,389	19
17	29	**Republic Airlines** (Minneapolis)	1,448,416	1,154,567	23	(46,269)	44	72,348	42
18	21	**Sohio Pipe Line** (Cleveland)[7]	1,202,228	3,004,946	11	284,765	5	(25,714)	49
19	18	**Braniff International** (Dallas-Fort Worth)	1,188,975	1,008,297	26	(160,611)	50	(94,431)	50
20	13	**Consolidated Freightways** (Palo Alto)	1,143,722	828,338	31	141,243**	15	464,796	18
21	22	**Roadway Express** (Akron)	1,130,082	632,926	34	84,114**	17	400,756	20
22	26	**USAir** (Washington, D.C.)	1,110,490	881,317	28	51,084	21	353,402	21
23	24	**Continental Air Lines** (Los Angeles)[8]	1,090,777	864,023	29	(60,356)	46	130,943	36
24	23	**Western Air Lines** (Los Angeles)	1,059,841	834,570	30	(73,400)	49	121,664	37
25	25	**Illinois Central Gulf Railroad** (Chicago)[9]	1,048,183	1,978,823	18	51,066	22	968,468	10
26	28	**Chicago & North Western Transportation** (Chicago)	981,735	935,088	27	54,325**	20	170,794	32
27	27	**Leaseway Transportation** (Beachwood, Ohio)	977,118	795,736	32	44,033	24	261,166	29
28	32	**Yellow Freight System** (Overland Park, Kans.)	936,239	467,080	41	33,231**	27	213,899	31
29	31	**Exxon Pipeline** (Houston)[10]	851,846	2,397,950	15	287,975	4	505,448	16
30	30	**Arco Pipe Line** (Independence, Kans.)[11]	848,121	2,362,397	16	242,815	7	303,252	26
31	●	**Texas Air** (Houston)[12]	719,400	1,304,650	22	(47,185)	45	43,788	44
32	35	**Piedmont Aviation** (Winston-Salem)	643,639	502,743	39	32,585	28	153,063	34
33	34	**BP Pipelines** (New York)	632,234	1,645,876	20	240,919	9	275,081	27
34	33	**McLean Trucking** (Winston-Salem)[4]	604,829	227,433	47	(6,336)‡	39	95,949	39
35	●	**Emery Air Freight** (Wilton, Conn.)	593,564	275,233	44	18,694	32	77,619	41
36	40	**Federal Express** (Memphis)[13]	589,493	570,112	38	59,340	19	274,923	28
37	36	**Frontier Airlines** (Denver)	577,430	390,238	42	31,961	29	158,842	33
38	37	**Telecom** (Houston)	467,751	240,119	45	(18,215)	41	29,181	46
39	39	**Allied Van Lines** (Broadview, Ill.)	460,052	55,184	50	2,713**	37	18,517	47
40	42	**PSA** (San Diego)	438,569	601,502	36	28,570	30	151,643	35
41	41	**Chicago Milwaukee St. Paul & Pacific RR** (Chicago)	416,006	1,032,856	25	200,332	11	312,506	25
42	44	**Rio Grande Industries** (Denver)	388,333	607,156	35	37,144	26	344,755	23
43	46	**Arkansas Best** (Fort Smith, Ark.)	386,522	176,161	48	15,867**	34	42,063	45
44	38	**Alexander & Baldwin** (Honolulu)	385,205	638,877	33	24,367	31	337,085	24
45	●	**Ozark Airlines** (St. Louis)	380,857	229,047	46	17,127	33	80,995	40
46	●	**World Airways** (Oakland)	371,974	499,726	40	(20,228)	43	67,632	43
47	45	**United Van Lines** (Fenton, Mo.)	371,759	63,500	49	1,103	38	15,457	48
48	47	**Kansas City Southern Industries** (Kansas City)	368,227	599,612	37	38,732	25	233,016	30
49	49	**Overseas Shipholding Group** (New York)	368,004	1,154,158	24	88,472	16	500,091	17
50	43	**RLC** (Wilmington)[14]	360,662	376,222	43	14,367	35	109,487	38
		TOTALS	**81,514,663**	**88,199,861**		**3,863,335**		**29,005,221**	

N.A. Not available

●Not on last year's list

[1] Consolidated operating revenues include those from non-transportation activities and sales from discontinued operations when these are published. All figures are for the year ending December 31, 1981, unless otherwise noted. All companies must derive more than 50% of their operating revenues from carrier operations and file public financial statements. Companies primarily engaged in freight forwarding or rental of vehicles are excluded.

[2] Net income for all railroads has been calculated according to generally accepted accounting principles.

[3] Figure is for Seaboard Coast Line Industries.

[4] Figures are for fiscal year ending June 30, 1981.

[5] Figure is for Mississippi River Corp.

[6] Figure is for North Central Airlines.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		OPERATING REVENUES		EQUITY					GROWTH RATE 1971-81		1981		1971-81 AVERAGE	
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK
75,000‡	3	6.8	17	11.7	27	8.92	7.13	2.58‡[3]	13.21	15	27.12	10	8.94	13
94,400	2	1.2	34	7.6	31	2.15**	2.84**	0.11	34.62	2	(18.92)	27	(9.57)	35
64,000‡	4					(2.40)	0.70	(0.36)	—		(5.70)	19	(6.90)	33
59,900	5	5.5	22	10.4	29	7.02	7.55	(1.57)‡	—		(15.13)	24	11.56	11
120,205	1	6.9	16	37.3	6	7.76	4.47	N.A.	—		—		—	
41,600	7	1.2	35	6.5	35	1.21**	(3.06)**	0.11	27.10	3	22.23	12	(11.64)	36
30,331	11					(0.27)	1.13	(1.18)	—		(35.29)	35	(15.74)	39
37,700	9					(3.44)	(0.97)**	0.32	—		(20.33)	28	(12.61)	37
36,230	10	4.1	29	14.1	25	7.37	4.69	1.57	16.72	11	(14.07)	23	2.01	22
38,788	8	7.2	15	9.8	30	2.73	3.47	0.44‡	20.02	6	(35.24)	34	12.24	10
51,500	6	5.1	23	7.3	32	6.18	5.78	4.55	3.11	24	6.05	17	5.63	17
21,690	13	7.7	13	18.6	16	12.49	10.70	1.36[5]	24.83	4	(16.44)	26	22.62	2
13,069	23	0.6	37	1.3	37	0.48	0.33	1.01	(7.17)	25	17.06	13	(1.14)	26
22,067	12	16.2	7	16.0	20	8.94	7.36	1.89‡	16.81	10	33.68	9	14.78	6
20,584‡	14	11.8	9	14.2	24	13.55	11.57	3.60	14.17	14	23.59	11	13.16	8
13,952	22					(0.98)	2.68	1.90	—		(38.16)	37	(2.40)	28
14,378	19					(2.30)	(1.19)	0.11[6]	—		(29.62)	32	2.66	20
235‡	48	23.7	6	107.4	38	N.A.	N.A.	N.A.	—		—		—	
10,800	26					(8.02)	(6.57)	0.48	—		(54.94)	41	(15.99)	40
17,000	17	12.3	8	30.4	8	10.63**	0.75‡	1.79	19.50	7	67.32	4	8.06	14
17,400	16	7.4	14	21.0	13	4.25**	2.18‡	0.88	17.06	9	12.07	14	9.85	12
10,765	27	4.6	26	14.5	23	3.13	4.71	(0.38)	—		(31.44)	33	(1.40)	27
11,000	25					(3.92)	(1.35)	0.59	—		(60.24)	42	(12.82)	38
8,900	28					(5.81)	(2.46)	0.43	—		(46.59)	40	(5.67)	31
18,500‡	15	4.9	25	5.3	36	N.A.	N.A.	N.A.	—		—		—	
14,345‡	20	5.5	21	31.8	7	3.89**	2.93	N.A.			6.97	15	—	
15,000	18	4.5	27	16.9	18	3.70	3.46	1.16	12.30	17	(5.85)	20	4.97	18
14,300	21	3.5	32	15.5	21	2.34**	(0.97)‡	0.93	9.67	22	6.79	16	1.68	23
939	45	33.8	3	57.0	4	N.A.	N.A.	N.A.	—		—		—	
890	46	28.6	4	80.1	2	N.A.	N.A.	N.A.	—		—		—	
N.A.						(8.11)	0.64	(5.80)	—		(44.91)	39	4.47	19
6,796	31	5.1	24	21.3	11	4.41	3.32	0.13**	42.25	1	116.07	2	16.40	5
N.A.		38.1	2	87.6	1	N.A.	N.A.	N.A.	—		—		—	
12,000	24					(0.92)‡	(0.43)	1.08	—		(16.33)	25	(6.23)	32
5,000	35	3.1	33	24.1	9	1.20	1.39	0.38	12.19	18	(9.10)	22	(0.61)	25
8,080	29	10.1	11	21.6	10	2.89	2.06	N.A.	—		41.24	7	—	
5,887	34	5.5	20	20.1	14	3.51	2.68	(0.47)	—		37.53	8	17.19	4
6,500	32					(4.93)	(5.83)‡	(0.86)‡	—		(56.85)	43	(2.97)	29
992	44	0.6	36	14.7	22	2.20**	1.07‡	1.19	6.34	23	110.59	3	—	
4,087	37	6.5	18	18.9	15	6.19	3.58	1.57	14.70	13	(35.64)	36	0.32	24
7,696‡	30	48.2	1	64.1	3	80.98	(84.08)	(5.95)‡	—		123.97	1	17.53	3
4,270	36	9.6	12	10.8	28	7.53	7.13	2.25	12.84	16	(29.13)	31	7.28	15
6,180	33	4.1	30	37.7	5	4.23**	(2.92)‡	1.65	9.87	21	5.57	18	(4.56)	30
3,840	40	6.3	19	7.2	33	2.66	7.89	0.63	15.49	12	(23.28)	30	13.03	9
3,835	41	4.5	28	21.1	12	2.09	(0.04)	0.75[11]	10.79	19	58.18	5	2.03	21
2,600	42					(2.06)	(2.88)	0.82	—		(7.79)	21	(8.96)	34
631	47	0.3	38	7.1	34	195.00	262.00	75.88	9.90	20	—		—	
3,900	39	10.5	10	16.6	19	3.95	3.18	0.74**	18.23	8	44.05	6	25.55	1
2,507‡	43	24.0	5	17.7	17	3.43	3.06	0.51	21.00	5	(41.01)	38	14.14	7
4,000	38	4.0	31	13.1	26	1.20	1.24‡	(0.04)	—		(22.63)	29	7.14	16
984,269														

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[7] Company is wholly owned by Standard Oil of Ohio (No. 21 on the FORTUNE 500).

[8] 51% owned by Texas Air (No. 31 on the Transportation list).

[9] Company is wholly owned by IC Industries (No. 92 on the FORTUNE 500).

[10] Company is wholly owned by Exxon (No. 1 on the FORTUNE 500).

[11] Company is wholly owned by Atlantic Richfield (No. 10 on the FORTUNE 500).

[12] Figures include amounts attributed to Texas Air's 51% share of Continental Air Lines (No. 23 on the Transportation list).

[13] Figures are for fiscal year ending May 31, 1981.

[14] Figures are for fiscal year ending September 30, 1981.

The 50 Largest UTILITIES (ranked by assets)

RANK '81	RANK '80	COMPANY	ASSETS[1] ($000)	OPERATING REVENUES[2] ($000)	OPERATING REVENUES RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
1	1	**American Telephone & Telegraph** (New York)	137,749,500	58,213,800	1	6,888,100	1	55,034,800	1
2	2	**General Telephone & Electronics** (Stamford, Conn.)	21,113,299	11,026,296	2	722,004	2	5,070,684	3
3	3	**Southern Company** (Atlanta)	12,415,034	4,256,237	7	325,979	10	3,122,908	8
4	4	**Pacific Gas & Electric** (San Francisco)	12,366,659	6,194,575	3	564,606	3	5,127,122	2
5	5	**American Electric Power** (Columbus)	11,567,039	4,192,645	8	368,279	7	3,321,568	7
6	6	**Commonwealth Edison** (Chicago)	11,196,823	3,737,311	11	449,894	5	3,692,899	5
7	7	**Southern California Edison** (Rosemead, Calif.)	8,728,543	4,054,356	9	489,912	4	3,444,416	6
8	9	**Middle South Utilities** (New Orleans)	8,318,556	2,771,788	21	281,483	11	2,189,870	14
9	8	**Consolidated Edison** (New York)	7,732,822	4,865,934	4	448,026	6	3,735,261	4
10	11	**Texas Utilities** (Dallas)	7,306,658	2,738,377	22	359,398	8	2,421,864	11
11	10	**Public Service Electric & Gas** (Newark)	7,277,089	3,471,652	15	264,137	13	2,832,930	9
12	12	**Virginia Electric & Power** (Richmond)	7,057,831	2,161,853	28	237,780	20	2,298,850	13
13	14	**Consumers Power** (Jackson, Mich.)	6,872,187	2,733,973	24	247,789	16	2,148,511	15
14	15	**Detroit Edison**	6,607,788	2,054,057	32	234,353	21	1,995,816	16
15	13	**Duke Power** (Charlotte)	6,531,044	1,908,454	33	336,251	9	2,497,545	10
16	16	**Philadelphia Electric**	6,304,195	2,433,425	26	277,565	12	2,335,999	12
17	17	**Florida Power & Light** (Miami)	6,122,580	3,088,620	20	224,137	23	1,936,335	17
18	19	**Houston Industries**	5,230,773	3,095,331	19	216,355	26	1,493,543	24
19	18	**General Public Utilities** (Parsippany, N.J.)	5,054,021	2,065,487	30	(15,904)‡	50	1,793,245	18
20	21	**Pennsylvania Power & Light** (Allentown, Pa.)	5,010,536	1,133,278	45	244,077	18	1,666,812	22
21	22	**Carolina Power & Light** (Raleigh)	4,715,835	1,343,558	40	203,597	27	1,650,710	23
22	23	**Central & South West** (Dallas)	4,643,244	2,055,318	31	229,559	22	1,703,237	19
23	24	**United Telecommunications** (Westwood, Kans.)	4,620,791	2,263,438	27	261,753	14	1,381,688	28
24	27	**Columbia Gas System** (Wilmington)	4,616,781	4,426,243	6	195,494	31	1,343,589	30
25	26	**Long Island Lighting** (Mineola, N.Y.)	4,508,152	1,664,832	34	247,732	17	1,686,355	20
26	25	**Ohio Edison** (Akron)	4,456,130	1,279,649	43	197,062	29	1,491,337	25
27	28	**Niagara Mohawk Power** (Syracuse, N.Y.)	4,175,932	2,150,718	29	220,643	24	1,667,934	21
28	20	**American Natural Resources** (Detroit)[3]	4,118,878	3,605,318	13	161,693	34	1,147,993	38
29	33	**Texas Eastern Corp.** (Houston)	4,096,791	4,526,114	5	220,634	25	1,284,191	35
30	35	**Panhandle Eastern Pipe Line** (Houston)	4,078,865	3,266,253	18	261,604	15	1,294,067	34
31	31	**Union Electric** (St. Louis)	4,047,277	1,105,536	46	157,083	35	1,395,882	26
32	30	**Pacific Power & Light** (Portland, Ore.)	4,016,820	1,288,553	41	167,536	33	1,370,134	29
33	29	**Northeast Utilities** (Berlin, Conn.)	3,950,597	1,655,057	35	95,118	48	1,304,405	33
34	32	**Internorth** (Omaha)	3,809,685	3,655,401	12	243,101	19	1,321,107	31
35	41	**El Paso** (Houston)	3,711,207	3,909,023	10	147,257	41	530,692	50
36	36	**Continental Telephone** (Atlanta)	3,543,759	1,589,652	37	143,874	42	980,729	45
37	37	**Cleveland Electric Illuminating**	3,406,075	1,012,930	47	155,734	36	1,097,277	39
38	42	**Arizona Public Service** (Phoenix)	3,396,790	882,154	49	197,434	28	1,394,184	27
39	39	**Transco Companies** (Houston)	3,395,355	3,525,378	14	140,093	43	650,564	49
40	43	**Gulf States Utilities** (Beaumont, Tex.)	3,343,419	1,221,714	44	150,931	39	1,069,827	42
41	44	**Public Service Co. of Indiana** (Plainfield)	3,285,490	720,126	50	151,628	38	1,269,284	36
42	38	**Baltimore Gas & Electric**	3,266,403	1,421,056	39	149,659	40	1,310,172	32
43	40	**Allegheny Power System** (New York)	3,190,739	1,607,461	36	132,477	44	1,248,633	37
44	48	**Northern Indiana Public Service** (Hammond, Ind.)	2,943,151	1,556,255	38	80,146	49	948,747	47
45	45	**Northern States Power** (Minneapolis)	2,860,076	1,280,889	42	127,553	45	1,070,541	41
46	46	**Consolidated Natural Gas** (Pittsburgh)	2,850,653	2,738,164	23	151,806	37	1,068,191	43
47	●	**Sonat** (Birmingham)[4]	2,814,181	2,568,747	25	173,672	32	991,189	44
48	49	**Illinois Power** (Decatur)	2,722,495	964,292	48	127,413	46	1,073,787	40
49	47	**Pacific Lighting** (Los Angeles)	2,705,512	3,357,006	17	123,132	47	949,395	46
50	●	**Ensearch** (Dallas)	2,689,924	3,362,474	16	196,959	30	902,722	48
		TOTALS	**410,544,184**	**192,200,758**		**18,376,598**		**144,764,541**	

N.A. Not available

●Not on last year's list

[1] Assets shown as of December 31, 1981, unless otherwise noted. Only assets of consolidated subsidiaries are included.

[2] Gross receipts from operations during the 1981 fiscal year, including any non-utility revenues from manufacturing, transportation, etc., and revenues from discontinued operations when they are published.

[3] Figures include amounts attributed to Primark, a subsidiary divested on December 31, 1981.

[4] Name changed from Southern Natural Resources on January 1, 1982.

NET INCOME AS PERCENT OF EQUITY		EMPLOYEES		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
							GROWTH RATE 1971-81		1981		1971-81 AVERAGE	
%	RANK	NUMBER	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK
12.5	28	1,040,122	1	8.55	8.19	3.99	7.92	9	33.78	5	10.28	9
14.2	15	204,000	2	4.32	2.94	2.35	6.28	16	27.52	10	7.91	15
10.4	45	28,944	4	1.81	2.23	1.71	0.57	44	11.21	35	4.31	38
11.0	43	26,625	5	3.41	3.60	2.75	2.17	36	15.55	29	4.73	35
11.1	42	26,392	6	2.37	2.41	2.43	(0.25)	46	9.69	37	3.73	40
12.2	31	17,300	11	3.06	2.97	2.86	0.68	43	24.26	15	2.51	44
14.2	16	14,569	13	4.93	3.50	2.46	7.20	12	24.03	17	8.42	12
12.9	27	13,292	14	2.44	2.01	1.68	3.80	29	23.87	18	2.17	45
12.0	32	22,798	8	6.44	4.67	3.52**	6.23	17	42.56	1	11.61	8
14.8	9	15,668	12	3.51	3.18	1.75	7.21	11	15.30	30	1.91	47
9.3	47	12,782	15	2.63	3.22	3.00	(1.31)	48	20.22	24	6.06	24
10.3	46	11,487	21	1.77	1.93	1.85	(0.44)	47	26.97	11	4.06	39
11.5	39	12,732	16	3.12	3.08	2.69	1.49	39	17.20	27	4.75	34
11.7	37	11,024	23	2.02	1.75	1.81	1.10	41	19.51	26	4.92	31
13.5	23	20,077	10	3.19	3.08	1.88	5.43	19	25.28	13	7.38	17
11.9	35	9,868†	26	2.25	2.00	2.10	0.69	42	24.19	16	5.35	29
11.6	38	12,134	18	4.25	3.94	2.56	5.20	22	23.77	20	4.76	33
14.4	14	9,509	27	3.14	3.14	1.89	5.21	21	5.88	39	1.34	48
		12,030	19	(0.26)‡	0.34	2.08	—		34.98	4	(3.94)	50
14.6	12	8,000	33	3.40	2.64	2.37	3.67	31	23.74	21	5.80	27
12.3	29	7,181	39	3.06	2.73	1.97	4.50	26	24.30	14	6.85	20
13.5	22	8,595	30	2.54	2.45	1.50	5.41	20	20.04	25	2.16	46
18.9	5	29,680	3	3.47	2.47	1.36	9.82	7	35.58	3	8.02	14
14.6	13	12,190†	17	5.50	5.02	2.74	7.22	10	(13.48)	45	7.48	16
14.7	10	5,777†	44	2.55	2.53	2.11	1.91	37	14.48	32	4.56	36
13.2	25	7,669	36	2.30	1.52	1.78	2.60	34	12.71	34	2.99	43
13.2	24	9,900	25	2.35	1.87	1.47	4.80	25	25.67	12	7.05	19
14.1	21	11,500	20	6.91	4.89	3.60	6.74	14	4.20	41	9.81	11
17.2	8	5,800	43	8.70	8.72	2.89	11.65	4	(29.34)	50	6.37	21
20.2	4	7,800	34	6.52	4.86	1.40	16.63	2	(13.64)	46	14.58	3
11.3	41	7,156	40	1.90	2.10	1.61	1.67	38	14.01	33	4.96	30
12.2	30	9,137	28	2.82	2.53	1.96	3.70	30	(5.73)	44	5.80	26
7.3	49	8,150	32	1.29	1.31	1.30	(0.08)	45	28.81	8	6.08	23
18.4	6	11,035	22	5.43	4.70	1.85**	11.37	5	(23.21)	49	16.59	2
27.7	1	8,200	31	3.07	(6.40)	1.86	5.14	24	4.37	40	12.42	7
14.7	11	21,271	9	2.34	2.13	1.41	5.20	23	16.47	28	4.34	37
14.2	18	5,169	46	2.52	2.26	2.03	2.19	35	23.61	22	4.84	32
14.2	19	6,333	42	3.26	2.75	1.74	6.48	15	22.43	23	8.33	13
21.5	3	2,890	50	5.41	4.72	1.97	10.63	6	(17.76)	47	17.92	1
14.1	20	4,585	48	2.24	2.05	1.46	4.37	27	14.90	31	3.00	42
11.9	33	5,120	47	3.42	3.21	1.71	7.18	13	10.64	36	5.42	28
11.4	40	8,915	29	3.70	3.64	2.79	2.86	33	30.35	7	5.88	25
10.6	44	5,585	45	3.03	2.59	2.15	3.49	32	31.90	6	6.30	22
8.4	48	6,524	41	1.37	1.47	2.10	(4.18)	49	8.70	38	(0.20)	49
11.9	34	7,378	38	3.89	3.23	2.54	4.35	28	23.79	19	7.27	18
14.2	17	7,508	37	7.44	5.73	3.14	9.01	8	(2.66)	43	13.01	6
17.5	7	7,800	35	4.24	3.43	0.96	16.01	3	(0.86)	42	14.42	4
11.9	36	4,023	49	2.84	2.87	2.45	1.49	40	28.71	9	3.14	41
13.0	26	9,934	24	4.52	4.04	2.51	6.06	18	35.69	2	10.23	10
21.8	2	22,814	7	3.55	2.82	0.67	18.15	1	(20.37)	48	13.56	5
		1,810,192										

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L—Life-Insurance Companies (page 136)
F—Diversified Financial Companies (page 138)
R—Retailing Companies (page 140)
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NOTES TO THE FORTUNE DIRECTORY

ASSETS are those shown at the company's year-end.

NET INCOME is shown after taxes and after extraordinary credits or charges when any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss.

STOCKHOLDERS' EQUITY is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded when its redemption is either mandatory or outside the control of the company.

EMPLOYEES: The figure shown is a year-end total except when it is followed by a dagger (†), in which case it is an average for the year.

EARNINGS PER SHARE: For all companies, the figures shown are the "primary" earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common-stock equivalents outstanding during the year. "Common-stock equivalents" generally include (a) convertible securities whose cash yield is less than two-thirds of the prime rate at the time the securities were issued and (b) options and warrants when the effect of their inclusion in the computation would reduce the "primary" earning per share. Per-share earnings for 1980 and 1981 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1971. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Results are listed as not available (N.A.) where the companies are cooperatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published in 1971. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1971 or 1981.

TOTAL RETURN TO INVESTORS includes both price appreciation and dividend yield, i.e., to an investor in the company's stock. The figures shown assume sales at the end of 1981 of stock owned at the end of 1971 or 1980. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spin-offs were reinvested at the end of the year in which they were received. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) where shares are not publicly traded or traded on only a limited basis. Where companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total-return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded. Where corporations were substantially reorganized—e.g., because of mergers—the predecessor companies used in calculating total return are the same as those cited in the footnotes to the earnings-per-share figures.

Most of the figures in this issue of the FORTUNE *Directory were prepared by reporter Brian Dumaine. The figures on per-share earnings and on total return to investors were prepared by Claudine Knight.*

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FORTUNE

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TEXAS INSTRUMENTS REGROUPS

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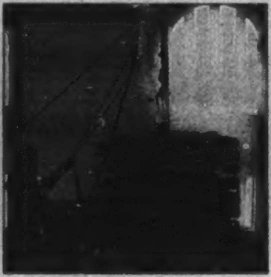

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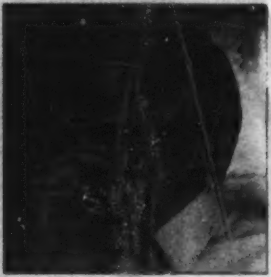

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ACKNOWLEDGMENTS

4—Daniel Kramer. 8—Udo Schreiber–Gamma Liaison, Michael O'Brien–Archive. 19—Milt Kobayashi. 25,26—Chartmakers Inc. 29,30,32—Michael McGinn. 34—Dirck Halstead, Breese Liaison. 35—Roddy Mimms. 36—Michael Evans, Terry Ashe. 37—Dirck Halstead. 40—James McGoon. 41—Ryszard Horowitz. 42,43—Barron Ludlum–*Dallas Times Herald*. 45—Patricia Byrne. 63—Copyright 1974, Main Event Management Corp. 81—Courtesy Tetra Pak.

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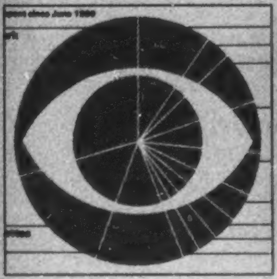
August 9, 1982



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DIRECTORY

The 50 Leading Exporters

For U.S. exporters the robust dollar is more an albatross than a badge of honor. When it suddenly takes more deutsche marks or yen or lire to buy products carrying the same dollar price tag, export business begins to slip away. With the world's purchasing power already stunted by recession, the side effects of a bloated currency are all the more serious. C. Fred Bergsten, director of the Institute for International Economics, maintains that each percentage-point rise in the value of the dollar costs the U.S. $3 billion in net exports. As the rise has been 30% in the last two years, Bergsten predicts that by late 1983—because of a lag before the full effects of a strong dollar are felt—the nation's trade balance will have been adversely affected to the tune of $90 billion.

The top-heavy dollar is especially burdensome for the 50 companies below, the leading exporters among the FORTUNE 500

THE 50 LEADING EXPORTERS

RANK '81	RANK '80	COMPANY	PRODUCTS	EXPORTS ($000)	FORTUNE 500 SALES ($000)	FORTUNE 500 RANK	EXPORTS AS PERCENT OF SALES %	EXPORTS AS PERCENT OF SALES RANK
1	1	**Boeing** (Seattle)	Aircraft	6,105,600	9,768,200	31	62.38	1
2	2	**General Motors** (Detroit)	Motor vehicles and parts, locomotives	5,731,100	62,698,500	3	9.14	38
3	3	**General Electric** (Fairfield, Conn.)	Generating equipment, aircraft engines	4,348,000	27,240,000	11	15.96	20
4	4	**Ford Motor** (Dearborn, Mich.)	Motor vehicles and parts	3,743,000	38,247,100	6	9.79	36
5	5	**Caterpillar Tractor** (Peoria, Ill.)	Construction equipment, engines	3,513,000	9,154,500	37	38.37	2
6	8	**McDonnell Douglas** (St. Louis)	Aircraft, space systems, missiles	2,769,100	7,384,900	45	37.50	3
7	6	**E.I. du Pont de Nemours** (Wilmington, Del.)	Chemicals, fibers, polymer products, petroleum, coal	2,646,000	22,810,000	12	11.60	30
8	7	**United Technologies** (Hartford)	Aircraft engines, helicopters	2,636,437	13,667,758	20	19.29	14
9	9	**International Business Machines** (Armonk, N.Y.)	Information-handling systems, equipment, and parts	1,857,000	29,070,000	8	6.39	44
10	11	**Eastman Kodak** (Rochester, N.Y.)	Photographic equipment and supplies	1,803,000	10,337,000	28	17.44	18
11	13	**Westinghouse Electric** (Pittsburgh)	Generating equipment, defense systems	1,311,450	9,367,500	34	14.00	24
12	19	**Signal Companies** (La Jolla, Calif.)	Trucks, engines, chemicals, audio-video systems	1,218,800	5,342,600	70	22.81	8
13	15	**Raytheon** (Lexington, Mass.)	Electronic equipment, aircraft	1,148,000	5,636,184	62	20.37	13
14	12	**Union Carbide** (Danbury, Conn.)	Chemicals, plastics	1,090,000	10,168,000	30	10.72	33
15	16	**Monsanto** (St. Louis)	Herbicides, industrial chemicals, textile fibers	1,042,000	6,947,700	50	15.00	22
16	18	**International Harvester** (Chicago)	Construction and farm equipment, trucks	1,008,000	7,327,165	46	13.76	25
17	19	**Hewlett-Packard** (Palo Alto, Calif.)	Electronic equipment	971,000	3,578,000	110	27.14	5
18	14	**Weyerhaeuser** (Tacoma, Wash.)	Pulp, logs, lumber, wood products, newsprint	946,000	4,501,512	84	21.02	11
19	17	**Dow Chemical** (Midland, Mich.)	Chemicals, plastics, magnesium metal	924,000	11,873,000	24	7.78	41
20	20	**Archer-Daniels-Midland** (Decatur, Ill.)	Soybean meal and oil, wheat, corn	899,836	3,647,491	107	24.67	6
21	31	**Exxon** (New York)	Petroleum and chemicals	896,000	108,107,688	1	0.83	50
22	24	**Philip Morris** (New York)	Tobacco products	833,500	8,306,600	43	10.03	35
23	28	**Occidental Petroleum** (Los Angeles)	Agricultural chemical products, coal	765,000	14,707,543	18	5.20	46
24	23	**Ingersoll-Rand** (Woodcliff Lake, N.J.)	Drills, compressors, pumps, bearings, tools	758,800	3,377,564	120	22.47	9
25	30	**Northrop** (Los Angeles)	Aircraft and related support services	716,400	1,990,700	194	35.99	4

largest U.S. industrial concerns. Boeing heads the list for the third consecutive year, and General Motors, General Electric, Ford Motor, and Caterpillar Tractor follow, in that order, as they did last year. Combustion Engineering (No. 44) and Tenneco (No. 48) appear for the first time since FORTUNE began compiling the list in 1980.

The 50 top exporters' combined sales to foreign customers, including their own foreign subsidiaries, rose from $57 billion in 1980 to $63 billion in 1981, amounting to more than one-quarter of all U.S. merchandise sold abroad. Adjusted for inflation, however, their exports were practically unchanged in 1981. For the nation as a whole, exports of non-agricultural merchandise declined by 4.7% in real terms last year.

Even though the swollen dollar has yet to take its full toll, the effects are registering. Exports as a percent of GNP fell from 8.6% to 8% in the U.S. last year but rose from 14.6% to 16.3% in Japan and from 24.9% to 27.1% in West Germany. Similarly, the U.S. share of exports by the 11 largest member countries of the Organization for Economic Cooperation and Development dropped from 22% in 1980 to 20.6% in 1981, while Japan's and West Germany's shares rose.

U.S. exporters may be helpless to halt the dollar's relentless climb or rejuvenate the world's faltering economies, but they have been aggressively lobbying for legislation that would make it easier for them to compete abroad. Bills to allow Japanese-style export-trading companies and a more precise, less inhibiting version of the Foreign Corrupt Practices Act are now wending their way through Congress. In the exporters' view, it would also help to increase the amount of money in the coffers of the U.S. Export-Import Bank. Laments Lee L. Morgan, chairman of Caterpillar: "Internationally we're not competing on an equal basis, and the distortions to our international trading system are placing the American exporter at a serious disadvantage." —JACLYN FIERMAN

RANK				EXPORTS	FORTUNE 500		EXPORTS AS PERCENT OF SALES	
'81	'80	COMPANY	PRODUCTS	($000)	SALES ($000)	RANK	%	RANK
26	10	**Lockheed** (Burbank, Calif.)	Aircraft and related support services	711,000	6,232,700	57	11.41	31
27	22	**Dresser Industries** (Dallas)	Oil-field and industrial equipment	707,100	4,614,500	83	15.32	21
28	25	**Deere** (Moline, Ill.)	Farm and industrial equipment	705,000	5,446,720	65	12.94	28
29	38	**Digital Equipment** (Maynard, Mass.)	Computer systems and equipment	685,138	3,198,099	137	21.42	10
30	33	**Celanese** (New York)	Fibers, chemicals	665,000	3,752,000	104	17.72	17
31	34	**FMC** (Chicago)	Industrial and farm equipment	645,243	3,581,960	109	18.01	16
32	26	**Mobil** (New York)	Lubricating oils	622,000	64,488,000	2	0.96	49
33	44	**Phillips Petroleum** (Bartlesville, Okla.)	Petrochemicals, natural gas	607,000	15,966,000	15	3.80	47
34	36	**R.J. Reynolds Industries** (Winston-Salem, N.C.)	Tobacco products	590,100	9,765,700	32	6.04	45
35	29	**Textron** (Providence)	Helicopters, machine tools, metal products	542,000	3,341,800	124	16.22	19
36	35	**Rockwell International** (Pittsburgh)	Electronic, automotive, and industrial equipment	529,000	7,039,700	48	7.51	42
37	39	**Sperry** (New York)	Computer systems and equipment	512,971	5,427,178	66	9.45	37
38	46	**Allied** (Morristown, N.J.)	Chemicals and fibers	506,000	6,407,000	55	7.90	40
39	32	**Aluminum Co. of America** (Pittsburgh)	Aluminum	504,800	4,977,500	78	10.14	34
40	42	**American Motors** (Southfield, Mich.)	Motor vehicles and parts	481,577	2,588,923	162	18.60	15
41	37	**International Minerals & Chemicals** (Northbrook, Ill.)	Potash, phosphate, industrial minerals	481,100	1,984,900	196	24.24	7
42	27	**Kaiser Aluminum & Chemical** (Oakland, Calif.)	Aluminum	481,000	3,225,500	136	14.91	23
43	43	**International Paper** (New York)	Pulp and paper products	439,000	4,983,400	77	8.81	39
44	●	**Combustion Engineering** (Stamford, Conn.)	Oil-field and industrial equipment	432,500	3,809,743	102	11.35	32
45	48	**Minnesota Mining & Manufacturing** (St. Paul)	Industrial, health-care, graphics, electronics products	424,000	6,508,000	54	6.52	43
46	●	**Cooper Industries** (Houston)	Hand tools, mining and petroleum equipment	423,409	3,135,120	142	13.51	26
47	47	**Control Data** (Minneapolis)	Computers and peripheral equipment	412,300	3,101,300	144	13.29	27
48	●	**Tenneco** (Houston)	Farm and construction equipment	407,000	15,462,000	16	2.63	48
49	●	**Cummins Engine** (Columbus, Ind.)	Engines and engine components	404,000	1,962,461	200	20.59	12
50	45	**Emerson Electric** (St. Louis)	Electronic components	398,547	3,429,261	118	11.62	29
		TOTALS		**62,997,808**	**629,706,670**			

● Not on last year's list.

Selling Computers to Main Street
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Tips for the New Economic Policy Team

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DE BEERS IN CRISIS

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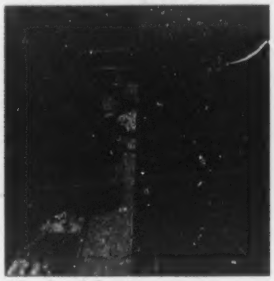
DE BEERS IN CRISIS

The diamond in the cover photograph by Andrew Unangst weighs 25.36 carats, and when Harry Winston rejoins it with its platinum setting and the 22 lesser diamonds it will be worth about $250,000. How De Beers's diamond business fell apart is chronicled in the article on page 42.

38 Economic team



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CARTELS

De Beers and the

by PETER W. BERNSTEIN

The startling thing about De Beers is that it has fallen so far so fast. Two years ago the celebrated South African company bestrode the world of diamonds: it controlled production, dictated prices, and laid down the law to the trade—all for handsome rewards. In 1980 diamond sales brought De Beers about $2.8 billion, fully $1.1 billion of which was profit. Last year sales dropped to half that level and profits were off by 34%. Flush with over $1 billion in cash two years ago, De Beers by now has spent most of it to support diamond prices, and the company sits on top of a veritable mountain of diamonds: its vaults contain more than $1.4 billion in stones. On FORTUNE's 1982 list of the 500 largest industrial companies outside the U.S., De Beers Consolidated Mines fell from No. 169 to No. 339, the largest drop of any listed corporation.

Scattered all over southern Africa are even fresher signs of De Beers's troubles. A diamond mine in the mountains of Lesotho, a tiny independent enclave surrounded by South Africa, has been shut down. So has another mine near Kimberley, the remote, historic little town where diamonds were discovered over a century ago. At other mines in South Africa and in neighboring Namibia, where alluvial deposits along the shores of the South Atlantic have yielded some magnificent gems, diamond production has been cut back.

De Beers has not reduced its production so severely since the company closed all its

A sentry stands guard over what may well prove to be the most valuable diamond mine in the world: the Jwaneng mine in Botswana. De Beers shares ownership with the Botswana government.

Photographs by David Goldblatt

The monarch of the world's diamond market, its revenues halved, is struggling to put its kingdom back together again.

Diamond Debacle

Harry F. Oppenheimer, 74, took over the chairmanship of De Beers and its South African sister company, Anglo American, after his father, who founded Anglo American, died 25 years ago. The Oppenheimer family owns 18.7 million shares of Anglo valued at around $180 million.

mines for four horrendous years during the 1930s. Musing about the present in his tasteful office in Johannesburg, Harry Oppenheimer, 74, the soft-spoken scion of the family that built its fortune in gold and diamonds, is continually reminded of those years: "These are the worst times that I can remember since the Depression." No wonder speculation has grown that diamonds have lost their place as both a luxury and an eternally wise investment, and that De Beers, after 50 years of domination, has lost its grip.

But dire predictions may be premature. As far as De Beers has fallen, it remains a strong company. Although drained of cash, it has assets of about $5 billion, over half outside the diamond business. The company's profit margin stood last year at an extremely attractive 50% of sales. De Beers's debt amounts only to $430 million, a small fraction of its borrowing capacity. Oppenheimer recently predicted that De Beers would add about $200 million worth of diamonds to its stockpile this year—less than half last year's $530-million jump and an indication that the dizzy decline is being checked.

Countries under company rule

Far from verging on collapse, the diamond cartel over which De Beers presides remains a tightly cohesive group. The important owners and producers of diamonds are countries, but De Beers has been strikingly successful in bringing them under its corporate rule. As new sources of diamonds have been discovered, the Central Selling Organization, a collection of companies controlled by De Beers, has brought each inexorably into its fold. The CSO today probably markets about 80% of the world's "gem diamonds"—those used in jewelry. And the retail market for diamonds remains strong.

Although to some extent the victim of forces beyond its control, De Beers made bad mistakes in the years before its fall. As befits such a company, they were enormous and costly. The process of adjustment and correction will not be easy; any real turnaround will have to wait until 1984 at the earliest. Even Oppenheimer, who is resolved to remain as chairman until the recovery is in hand, does not see better times just around the corner. "I would not buy De Beers shares now," says the owner of 222,250 of the shares—traded over the counter in the U.S. now for about $4 each, compared with $12 two years ago.

Research associate: Edward C. Baig

The big trouble for De Beers began in the late 1970s, when inflation caused a worldwide rush from paper money to tangible assets. The price of gold then jumped from $132 to $875 an ounce; silver shot up from $4 to $50 an ounce. In 1979 the price of a one-carat D-flawless diamond, the benchmark of quality in the industry, leaped from $23,000 to $62,000 (see chart, page 48).

The speculative orgy began in Israel, a leading center for the cutting of diamonds. Around Tel Aviv, diamond cutters buy "rough"—uncut stones—and turn them into glittering gem diamonds. These stones are then sold to manufacturers of jewelry. To encourage the diamond industry, a major earner of foreign currency, the Israeli government subsidized interest rates: in 1977, *diamantaires* could borrow money from banks at 6%, about 25 percentage points below the prevailing rate. Armed with cheap money, scared of inflation, worried about devaluation of Israel's currency, the dealers rushed to buy and hoard diamonds.

The speculation quickly spread to other cutting centers. In Israel the demand was mainly for "melees"—polished diamonds of about a quarter carat in weight; in Antwerp and New York dealers scrambled for larger stones. As the fever spread, dealers were reselling diamonds bought by the box from the CSO for much more than their original price, hardly pausing to raise the lid. And they raced to sell to people who wanted to stash away the hardest of all possible assets in their vaults. At their peak, investment sales accounted for almost a fifth of the gem diamond market.

The place where most diamond dealers have to go to buy, De Beers was the center of this speculative storm. Ten times a year De Beers invites about 300 select diamond dealers to its "sights"—sales where *diamantaires* from all over the world assemble. The sales are held at 17 Charterhouse Street, in London's diamond district. Diamond-shaped glass panels on the heavy wooden door give the only clue to what lies inside. There each year the CSO sells 20 million to 30 million carats of diamonds, sorted into thousands of categories and placed in plain brown shoeboxes.

A seller's market

Before each sight, dealers place orders for certain types and quantities of stones. Except on "specials"—stones that weigh 10.8 carats or more—prices are fixed, but dealers can haggle about quality. In the end, though, such is De Beers's power that dealers must either buy the whole box of stones or nothing. Dealers must pay cash; those who are too troublesome may not have a chance to buy at all next year.

The speculative boom and the hoarding threatened De Beers's control of the market. To flush diamonds out of dealers' inventories, De Beers at first flooded the market with uncut stones. The boom persisted. The stockpile of diamonds in cutting centers began to rival that held by the CSO. Each new stone the CSO sold diminished De Beers's leverage over the trade.

Nor could De Beers get control by simply refusing to sell stones at all. Had it tried, the cartel so carefully put together would have burst apart. Even as it was, other producers were angry and restive: on the open market diamonds were fetching prices much higher than De Beers was paying. One vocal complainer was Botswana, dependent on diamonds for more than half its export earnings. And according to one De Beers executive, "the Russians were really upset." After South Africa, the Soviet Union is the world's largest producer of gem diamonds. Had the Russians left the cartel, they would have dealt De Beers a crippling blow.

Never having faced such a crisis, De Beers was nearly torn apart by it. On the one hand it warned of the dangers of the speculative boom; on the other it milked the boom for all it was worth. In 1978 Oppenheimer condemned the speculation as "unhealthy and unsound." But in the previous two years De Beers had profited greatly by raising its prices by 40%—enough to encourage any dealer to hurry to buy before the next price hike.

Searching for a way to appease producers and puncture the speculation, De Beers introduced a surcharge on diamonds sold by the CSO. The beauty of the surcharge was that it could be quickly applied to allow producers to profit fully from the boom. But it also checked speculation, since dealers knew the surcharge could be just as quickly removed, in effect bringing prices back down. The first surcharge of 40% was applied at the March 1978 sight. By July the market had cooled sufficiently so that De Beers could reduce the surcharge to 10%, lowering prices for a brief period. "The surcharge was a hidden way of doing something we said we would never do," explains Tim Capon, a senior De Beers executive in London. "It allowed us to reduce the price of rough without ever having to declare a price reduction."

Revoking a good move

But De Beers, nervous about making so basic a change in its old formula for success, distrusted its own innovation. The surcharge did have deficiencies, but none need have been fatal. Julian Ogilvie Thompson, second in command to Oppenheimer and his heir apparent, remarks that the surcharge "is a blunt instrument. The market was placing a different premium on different kinds of diamonds, and you needed a price increase that was not uniform for all goods." But the best opinion today is that the surcharge had overriding advantages. Concludes Anthony Oppenheimer, a cousin of Harry's who helps preside over the CSO: "In retrospect, we should have kept the surcharge on longer." But De Beers canceled the practice a bare five months after it began.

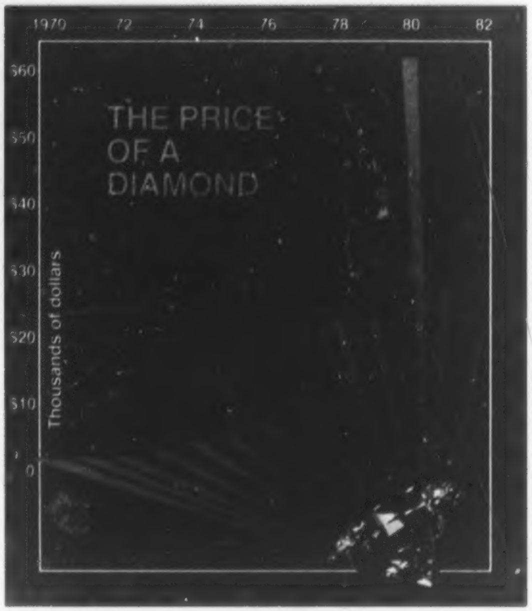
Surrendering that new policy, De Beers mistakenly reverted to the old one. The company increased prices by 30% in August 1978. Since it had announced when it imposed the surcharge that basic selling prices would be increased only when justified by demand, the new increase was taken as an endorsement by the highest authority of all—De Beers itself—that the value of diamonds was climbing. A true believer, the trade continued to bid up prices, especially for larger stones. Having thus induced an increase, De Beers responded to it with another, this time by 13% on larger stones. Five months later came still another increase of 12%.

These prices, one climbing atop the other, constituted a shocking misjudgment of the market. In 1980 diamond prices were 140% above what they had been in 1975. But unit sales—the total number of carats sold per year—were still at 1975 levels. The last price rise came just as demand actually turned down, particularly for larger stones, where the greatest increases had occurred. De Beers was supporting its own price structure by buying from dealers as well as producers, but it had no place to sell what it was buying. At those levels even buyers dependent on the CSO for their livelihood had to turn away. De Beers's inventory went up from around $500 million to around $940 million during 1980.

continued

Gavin Relly (seated), 56, will become chairman of Anglo American when Harry Oppenheimer steps down at year-end. Harry's only son, Nicholas Oppenheimer (left), 37, will become deputy chairman. The other deputy chairman and the man likely to succeed Harry at De Beers eventually is Julian Ogilvie Thompson, 48.

In the sorting house at Jwaneng, workers slip their hands into gloves fixed in the sides of bins. Then they separate diamonds from concentrate. The diamonds are flown to London for sale to dealers.



The Price Is Not Forever

Fewer than 40 diamonds were certified as one-carat D-flawless in the U.S. last year. But the price of those rare stones reflects the movement of prices in the industry. Although 1982 looks like a bust year, the price of $18,000 is high by historic standards.

Then last year the market collapsed. Eager acquirers so recently, merchants disgorged a gleaming river of stones. Panicked by falling prices, burdened by high interest charges, they had to liquidate what they had collected. The CSO's sales of $1.4 billion were the lowest in six years.

While still laying out money to mop up the flood, De Beers is also reducing production. In the last decade De Beers's own production has risen from about ten million to over 15 million carats a year. With the spectacular new mine in Botswana, plans called for production to jump to 19 million carats annually. But since the diamond glut, De Beers, which produces half the world's gem diamonds, has closed down or cut production at five of its 17 mines. It will produce fewer big, better-quality stones and more of the smaller ones that remain in demand.

Old cartels never die

De Beers is also using all the leverage it has over mines it does not own. According to its contracts, if sales decline to a certain point De Beers is required to buy only a certain percentage of each producer's output. One result: Botswana now has a stockpile of unsold diamonds valued at about $100 million.

Through good times and bad, De Beers has done a remarkable job of holding the producing cartel together. Producers that used to grouse about not being paid enough are now grateful for De Beers's purchases. Oppenheimer says the company controls "a greater proportion of the world's diamond production than it did ten years ago." It has contracts with countries that seem unlikely clients for a huge corporation owned and run by whites in a racist nation. In the grip of a civil war, Angola virtually stopped producing diamonds after winning independence from Portugal in 1975. Untroubled that Angola is avowedly Marxist, De Beers soon persuaded its new leaders of the advantages of an exclusive club. By 1979 the CSO was once again selling Angola's output. The prospect that Namibia, Angola's southern neighbor, will leave the CSO as soon as it gets its independence seems less likely now that Angola has come securely into the fold.

Of all the independent producers, Botswana is the most important. During the next decade and beyond, that arid, thinly populated country may produce more big diamonds than either South Africa or the Soviet Union. According to Oppenheimer, Jwaneng, Botswana's big mine, "is probably the most important diamond find since the discoveries at Kimberley." De Beers has acquired half ownership of Jwaneng and the country's two other diamond mines; its partner is the Botswana government, which gets 70% of the profits. The beneficiary of De Beers's producing and marketing skills, Botswana, one of the most stable countries in black Africa, is unlikely to break away from De Beers. De Beers's lease on Jwaneng does not run out for another 21 years.

In Zaire De Beers has shown not clever diplomacy but raw power. When Zaire broke out of the cartel last year it accused De Beers of cheating to increase its commissions. In 1981 Zaire produced around $45 million in diamonds, mostly of the industrial type. For De Beers the amount was small but the principle large: the confidence of producers is essential glue for the cartel. So De Beers was quick to strike. As a member of the CSO, Zaire was selling bort—low-quality diamonds crushed into powder—for $3 a carat. Today it is lucky to get $1.80. Ever since Zaire broke away, De Beers has been dumping its own bort on the market. Asks one De Beers executive: "Anyone want to follow Zaire?"

A recently discovered mine near Lake Argyle in western Australia is remarkable because it will produce 20 million to 25

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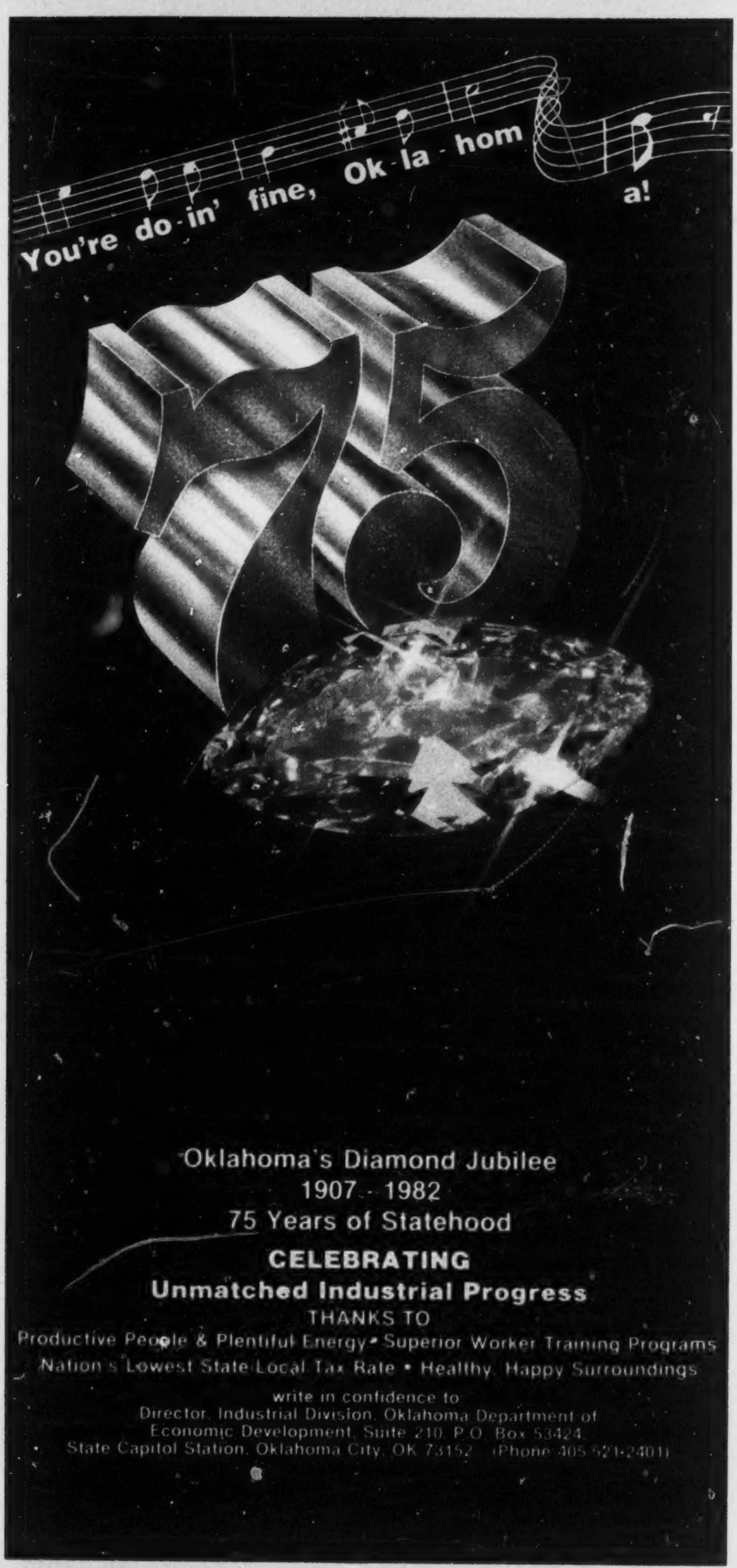
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75

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De Beers is now more solicitous of captive clients.

million carats a year by 1986. But almost all will go for industrial use. Harry Oppenheimer estimates that Argyle's production will amount to about $175 million annually. Although he says the mine is "not a major thing," it was important enough for him to make a unique concession in a preliminary agreement signed with the Australian owners earlier this year. De Beers will market all Argyle's gem diamonds, but only three-quarters of its industrial diamonds, leaving Australia to sell the rest. Never before has De Beers allowed producers to sell part of their output elsewhere than through the CSO.

De Beers has been changing its ways with customers as well as suppliers. At the sights now, De Beers is far more solicitous of its captive clients. Monty Charles, the executive in charge, is not a man who sees things from the perspective of customers, but he has been telling them recently that the CSO would understand if they bought fewer diamonds. In the past a dealer was likely to be purged if he missed a sight. To help customers get the diamonds they want, the CSO now sells 5,000 varieties instead of the 2,000 offered before.

A need to upgrade

With production under control and the CSO's powers reestablished, De Beers now faces the need to expand the most profitable segment of the $18.5-billion retail market—the sale of larger stones.

Despite the slump in the sale of uncut stones, more pieces of jewelry containing more total carats and costing more money were sold last year than ever before. Still growing, the market in the U.S. continues to be the world's best. Today the biggest part of the market is sales of diamonds for married women. Eight years ago only 4% of married women in the U.S. acquired a new piece of diamond jewelry; last year one in ten did. A man of stout heart, Jeremy Pudney, De Beers's marketing manager, speaks optimistically of a new male market in America, insisting that "millions of women are trying to decide what to buy a man instead of a tie or shirt."

The most sparkling new market for dia-

continued

monds in recent years has been Japan. Fifteen years ago the U.S. made up almost half of the diamond jewelry market; today it represents only a third. Japan now accounts for almost a fifth of the world market. In 1967 6% of Japanese brides-to-be got diamond engagement rings. Today two out of three get them.

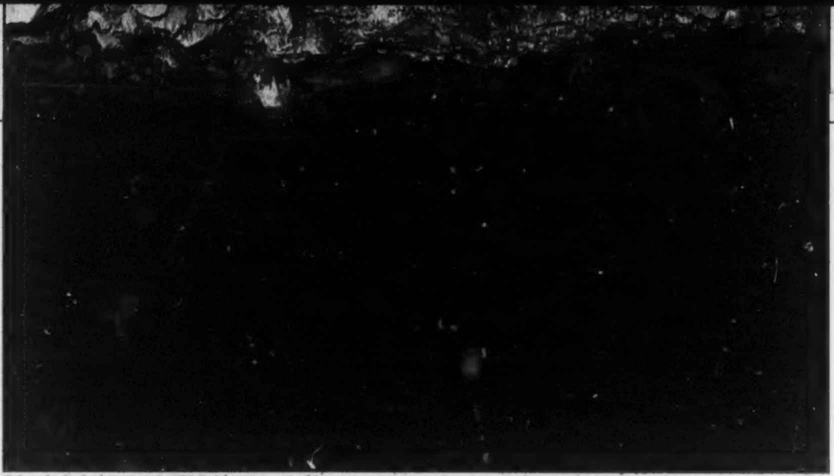
While De Beers has broadened the market, the stones that sell are getting smaller and smaller. Last year the average diamond in an engagement ring weighed .29 carats; five years ago the stone in the center of that ring was 25% bigger. Nor is diamond jewelry a big-ticket item any longer: about one-third of all the pieces of diamond jewelry sold in the U.S. last year cost less than $300. The average engagement ring cost about $700.

Since most of CSO's revenues, and most of De Beers's profits, come from the sale of larger stones, the company faces the hard and prolonged job of reversing this downsizing. For that purpose De Beers, which has had notably successful advertising campaigns in the past—"a diamond is forever" are household words—is launching a multimillion-dollar campaign pushing larger stones, predictably to be worn by more gorgeous women. "A diamond of a carat or more. There's only one in a million," is De Beers's new pitch. One recent ad shows a stunning model wearing nothing but a solitaire diamond necklace. "She can't flaunt a fur on the Côte d'Azur," reads the tagline.

Besides trying to induce trading up, De Beers is thinking about stimulating the sale of diamonds as investments once more—no easy task given the recent collapse of prices. But the job may not be impossible if De Beers should succeed in putting together a mechanism for resale of gems by individuals. And De Beers, which has weathered bad times before, does not think that the present recession is forever. With the upturn, Harry Oppenheimer says, the sale of big stones will resume. He associates the sale of big diamonds with that most durable of human frailties, vanity—which continues in plentiful supply.

If restoring the market takes time, De Beers has the strength to wait. Of its about $3 billion in assets outside the diamond business, the largest is a 38% holding in Anglo American Corp. That giant enterprise controlled by the Oppenheimer family produces gold, steel, and coal and reaches into insurance, real estate, and a wide variety of other enterprises. Through Minorco, a holding company in which De Beers and Anglo American have large stakes, De Beers also owns a big chunk of Phibro-Salomon, Englehard Corp., Consolidated Gold Fields, and Canada's Hudson Bay Mining & Smelting. De Beers can and will borrow against those resources to finance the heaps of diamonds in inventory until the revival comes—Oppenheimer, who didn't get where he is by being pessimistic, is that confident. He even sees the day when De Beers's inventory, bought for over $1.4 billion and stored at enormous cost, could be sold off at a big profit.

If that comes to pass, Harry Oppenheimer may win a prize as crisis manager of the year—maybe a blue-white diamond. ■



Black laborers drill blasting holes at an Anglo American gold mine.

Toil at the Lowest Levels

Heavily dependent on black labor, mining companies in South Africa have been among the slowest to recognize the rights of black Africans. The storm that blew across the nation in the mid-1970s, punctuated by riots and death, calmed somewhat when blacks won the right to form trade unions and engage in collective bargaining. But in mining, improvements have been meager. Black rage is mounting: in July ten blacks were killed and hundreds arrested in riots at mines west of Johannesburg.

The principal black grievance is disqualification from the better-paying jobs in mining. By law only "scheduled persons"—meaning non-blacks—can get such jobs. Blacks are not allowed to polish a stone bigger than 1.19 carats—a typical absurdity of apartheid. The average black gold miner earns $238 a month, while whites average over $1,000. Over 500,000 blacks work in South Africa's mines. Only a tiny fraction are unionized.

Once thought of as liberal employers, De Beers and Anglo American have been losing that reputation. In Parliament as long ago as the 1950s, Harry Oppenheimer was an outspoken foe of apartheid. And for many years he has fervently argued for the right of blacks to unionize. But as an executive, Oppenheimer does not always practice what he preached. A trade union organizer insists that De Beers resisted furiously before consenting to its first and only union, a small one at three mines near Kimberley. De Beers and Anglo pay black miners slightly more than other mining companies, but still pay them far less than white wages. The company's industrial relations consultant admits, "We find it very hard to live up to our rhetoric."

In their defense, Anglo American and De Beers say that they are working within the Chamber of Mines, the group that sets wage and employment policies, to help blacks. Their familiar argument is that they can do more for all black miners by remaining in the Chamber than they could by breaking out of it.

But Oppenheimer's corporate empire occupies a position of primacy. With coal, gold, and diamond mines that employ 185,000 black workers, Anglo and De Beers have great power. "Black wages have got to get up to the scale of white wages," Oppenheimer said recently. Although Anglo's mines were not involved in the trouble in July, those riots signal that the time to deliver on that promise is at hand.

Debt-Equity Swaps: The Hot New Risk

One of the hottest—and perhaps riskiest—new products on Wall Street is the debt-equity swap, a transaction invented by Salomon Brothers last year and eagerly imitated by most other investment bankers. Though the payoff for the banker can be huge, a lot can go wrong—as First Boston demonstrated when it got stuck with all that Cities Service stock.

The swap is a creative response to today's big corporate problem: heavy debt and sagging stock and bond prices. If corporations retire their bonds by paying cash—an appealing idea at current depressed bond price levels—they also incur a tax liability. If a company bought one of its bonds with a par value of $1,000 for, say, $400, it would owe taxes on the difference. The debt-equity swap is tax-free, or at least the IRS hasn't stopped it yet.

An investment banker buys, primarily from institutions, millions of dollars worth of a company's debt and sells that debt back to the company. Instead of taking payment in cash it takes stock from the company and sells it back to the same sort of institutions that used to hold the company's debt. The investment bank gets about $2.50 from the company for each $1,000 bond it turns in. But where the bank seeks its big profit—and takes its big risk—is in the spread between the price at which it receives the stock and the price it hopes to get when it resells the stock.

First Boston ran into trouble by overpricing, at $37 a share, the 2.1 million shares of Cities Service stock that it began offering May 21. To keep the price up it had to keep buying back shares while it was selling them. First Boston still had 570,000 shares when its luck turned and Gulf made a $63-a-share tender offer. Then Gulf withdrew its offer. First Boston's luck had changed again.

From nowhere First Boston skyrocketed to the front rank in M&A last year, playing a role in deals that totaled $30 billion. The department's style is offbeat. In most sections of the company executives favor gray suits and speak an English that is understood throughout Darien, Connecticut. In the M&A section the executives are a shade hip, sometimes saluting one another, "Hey, Babe." The section's "creative director," Bill Lambert, 35, reads research reports and dreams up mergers. Then he tries to convince the participants.

Like the guy who asks every pretty girl in the hall to dance, Lambert gets turned down a lot. He put in a call to the vice chairman of a major brewery suggesting that it buy a company that makes cellophane-wrapped crackers sold in vending machines. He was crisply informed that the brewer already had a banker. But from time to time the girl says yes. Warner-Lambert followed up on his suggestion that it buy Entenmann's, an East Coast bakery. Warner-Lambert paid $240 million for Entenmann's, and First Boston collected a fee of $1 million.

Perella, 40, and Bruce Wasserstein, 34, run the department and personally manage the firm's intermediary role in the big takeovers—for which each was paid more than $1 million last year. Wasserstein is a whiz kid, a brilliant architect of complex deals, although a little egotistical. Perella is the supersalesman, voluble and emotive. To demonstrate the concept of operating in the dark, he stumbles around his office with his eyes closed.

To a degree their success has been a matter of luck. Du Pont might have called upon Morgan Stanley, with whom it had a long-standing relationship, to represent it in the Conoco takeover, but Morgan Stanley had already been signed up by Conoco. Once they had the job, however, Perella and Wasserstein handled it ingeniously. They so structured Du Pont's tender offer that the chemical company would not get stuck with an awkward minority ownership if it failed to get all of Conoco. Success in M&A has brought some other work First Boston's way. First Boston is the primary co-manager, with Morgan Stanley in a lesser role, of a syndicate that is selling $250 million of Du Pont notes.

A happy marriage so far

Shinn's single most important move for First Boston was also made in 1978, a decision to buy into a venture with Credit Suisse, one of the three largest banks in Switzerland. It set First Boston back $24 million. Credit Suisse had been wed to White Weld in a European partnership, but that broke up when Merrill Lynch took over White Weld. The Swiss were eager for another American partner. And Shinn was eager to replace Zombanakis's operation.

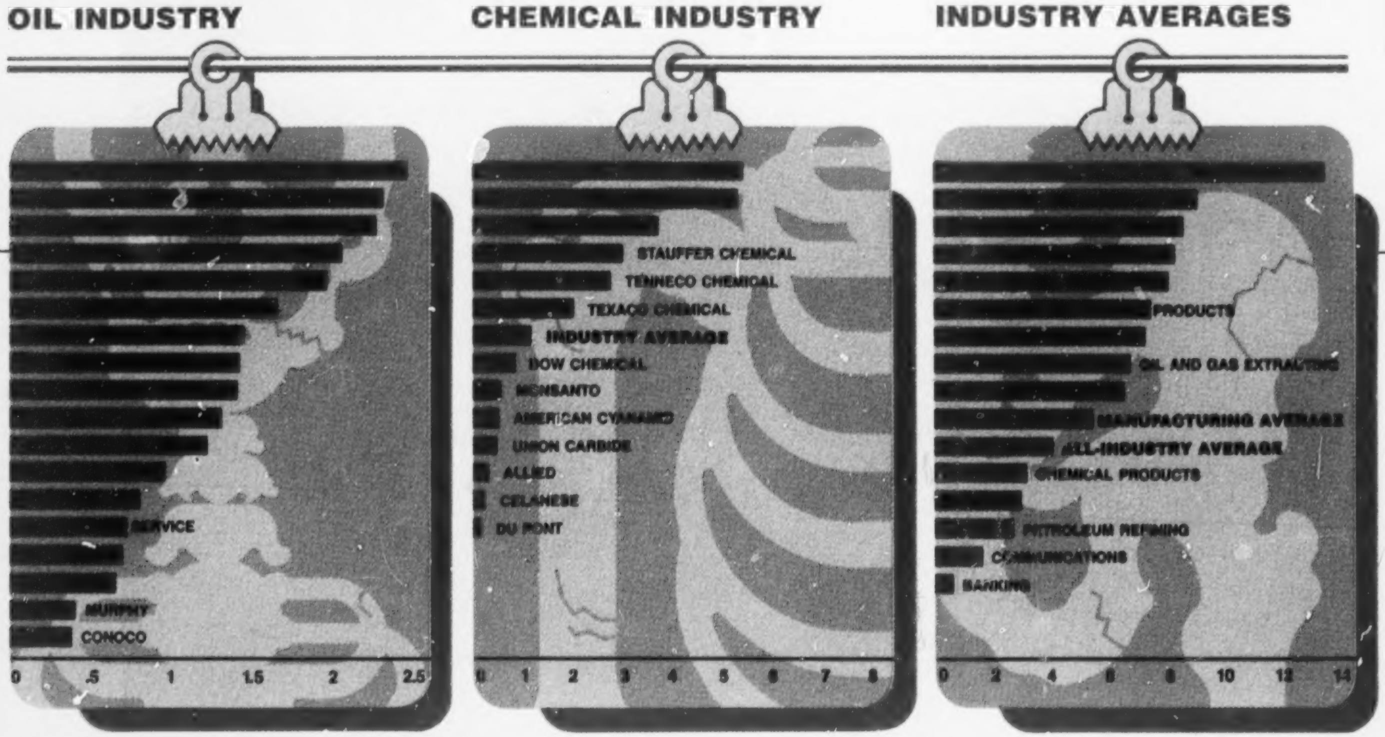
So far the marriage has been happy and fruitful. Credit Suisse owns a little less than half the venture, called Financière Credit Suisse-First Boston, and First Boston owns 34%. In an intertwining relationship, Financière owns a 38% stake in First Boston, making it the largest shareholder by far. (First Boston's 66 managing directors own 11%, or would if they converted all their options into stock.) The merger helps First Boston sell its U.S. clients' stocks and bonds in Europe and assist clients in buying European companies. Credit Suisse gets a corresponding advantage in access to U.S. markets.

First Boston still has some troubling weaknesses. For one, since it doesn't have a retail network like Merrill Lynch or E.F. Hutton, it is still entirely dependent for customers on some 5,000 or so institutions. From time to time First Boston has considered buying a retail network but has always rejected the idea. And Shinn, having spent a lifetime in a retailing firm, says he has no interest in buying one now. "I don't want to make this place a one-stop financial services company like Merrill Lynch," he says. "The only way to run a place like that is to be militaristic."

In addition First Boston, experienced bond trader, has neglected stock trading. Although it has been expanding the equities department, it still has a research staff of only 29 and a sales staff of 68. With the market so flat, that's not a big problem. But if the market picks up, First Boston would be hard-pressed to keep pace.

Along with other investment bankers, First Boston will have to operate in an ever more competitive marketplace. Shelf registration, for example, the new SEC rule that allows corporations to register large blocks of new securities which can then be sold when the market is favorable, is putting a lot more pressure on the bankers to cut their prices and increase their risks. Under George Shinn, First Boston has proved it's willing to do both. ■

Accident rates per 100 full-time employees (1980)



Scoring Corporate Safety

Compared with the rest of industry, oil and chemical companies generally have good safety records. But the rate of disabling accidents at Ferro, a Cleveland manufacturer of frit, a glazing and coating material, is 45 times greater than that of the chemical company with the best record, Du Pont—which coincidentally owns Conoco, the safest oil company. The industry averages in the right-hand table are from the Bureau of Labor Statistics; the oil and chemical ratings are from the American Petroleum Institute and the Chemical Manufacturers Association (CMA). The figures include work-related illnesses as well as injuries. The CMA and BLS chemical industry averages differ because they are based on different samples. The CMA figures for Tenneco, Texaco, and Richardson-Vicks cover only their chemical divisions.

pational Safety and Health Administration was established in 1971. The rate for all private industry moved up fairly steadily from 3.2 in 1972 to 4.2 in 1979. In 1980 the rate dropped to 3.9. The 1981 figure won't be known until late this fall.

There is no widely accepted explanation for the increase. It could be attributed to the millions of inexperienced or young workers who came into the labor market in the 1970s, because accident rates among them are much higher than among experienced workers. That explanation would also account for the drop in 1980, when fewer new workers were hired because of the recession.

Another possible explanation is that accidents did not increase, but more of them got reported after OSHA's establishment. A less charitable explanation of the increase is that the growing generosity of workers' compensation payments has encouraged workers to submit more claims. Most states set payments at two-thirds of the injured worker's wage up to a maximum, which ranges from $112 a week in Mississippi to $942 a week in Alaska. The income is tax free.

The bulk of workers' compensation claims until now have concerned accidents, but companies face large and growing liabilities because of the health effects of substances, such as asbestos, that were used years before it was known that they might be damaging. To old enemies are being added some newly recognized ones, such as polyvinyl chloride.

Liberal interpretations

The generous payments and liberal interpretations of what a worker can blame on his employer are raising workers' compensation costs. A teacher can attribute his ulcer to the strain of dealing with unruly students. A salesman can blame his alcoholism on the employer who encourages him to entertain customers. "Employers are being held responsible for the health habits of their employees," says Robert Paris, a workers' compensation consultant to Aetna Life & Casualty.

California, Illinois, Michigan, Minnesota, Rhode Island, Wisconsin, and the District of Columbia are especially known for generosity. The cost of workers' compensation has become a deterrent to new business in Minnesota, says Brian Fahey, director of research of the Minnesota Association of Commerce and Industry. More than half the bus drivers in Washington, D.C., managed to sustain an injury in 1980, judging by the successful claims filed. But the District of Columbia city council recently signaled that it recognizes workers' compensation has been abused. The council enacted a new law that tightens the basis for claims and cuts the maximum weekly payment from a handsome $496 to $396—the average working wage in the capital.

The facts about job safety can be as confusing as they are controversial. Last year

continued

"Going across the creek" became a Du Pont euphemism for being blown to bits.

the Council on Economic Priorities, a liberal think tank supported by foundation grants, turned the generally accepted facts upside down by saying Du Pont had the "worst record" among eight major chemical companies.

The council based its findings not on accident rates, which aren't usually available on a company-by-company basis, but on complaints and citations by OSHA, which are. Since until recently even anonymous letters could trigger OSHA inspections, the council picked a shaky basis for its findings. The Department of Labor found the study lacked "the minimal requirements of objective analysis" and misused raw data. Du Pont points out that while the council reported the company had the greatest number of "willful" (most serious) violations, the study failed to say that OSHA backed down on the citations when challenged.

Mr. Magoo in the foundry

Industry portrays the OSHA inspector as a bumbling figure, like Mr. Magoo in the old film cartoons, who might walk blindly through a hellhole of a foundry finding nothing wrong and then cite an otherwise irreproachable office next door because one of its filing cabinets was not bolted to the floor. If you are expecting a visit from the OSHA inspector, don't leave out that antique brass fire extinguisher you plan to turn into a table lamp or you'll be cited for having an inoperable extinguisher. That's what happened to a small Texas company.

Companies that have their own sophisticated safety programs regard OSHA as irrelevant. Says Ned K. Walters, Du Pont's director of safety, "We told our people to obey OSHA regulations but don't let that interfere with our safety program." B. Craig Farmer, a safety expert at the Travelers Insurance Co., observes that OSHA concentrates on checking for unsafe conditions, but most accidents are caused by unsafe acts. OSHA has little to say about the causes of the mundane accidents that Farmer says make up 70% or more of injuries: slips and falls, improper lifting, careless driving. Hotel maids strain their backs by reaching across a bed to make it instead of walking to and fro. Even serious accidents can have trivial causes. A steelworker disdains safety lines when venturing out on a beam 40 stories up, or a painter steps back to admire his work, forgetting he's on a scaffold.

Under earlier Administrations, OSHA sometimes seemed to think that its duty was to convict industry rather than encourage safety. But Thorne Auchter, President Reagan's OSHA director, speaks of being a "cooperative regulator" who will work to help industry improve its safety record by stressing human factors, such as training. Instead of casting a wide net and spending a lot of time visiting plants at which they found no violations, OSHA inspectors are now focusing on industries and companies with poor records. Almost half of OSHA's inspection force will concentrate on the accident-prone construction industry, which is where Auchter came from.

While businessmen are, of course, delighted with the turn in OSHA's policy, labor isn't. "Relations between labor and OSHA are at their lowest possible ebb," says George Taylor, the AFL-CIO director of occupational safety and health, who has just had a nasty exchange of letters with Auchter. Taylor charged Auchter with creating a "blackout" of safety data and invoked the Freedom of Information Act. Auchter replied he was tired of trying to satisfy Taylor's "seemingly endless requests for data," which Taylor seemed "unable to competently analyze." In the exchange of letters Auchter said Taylor didn't realize the days were gone when OSHA confronted industry in a spirit of "vicious adversity."

What it takes to stop the little accidents—as well as the big ones—is unremitting, almost infuriating fussiness about safety from the head of a company all the way down. Clay Smith, business manager of Du Pont's applied technology division, which provides safety and health consulting services to other companies, says that clients who establish serious safety programs average a cut in accidents of 38% the first year.

Du Pont's fussiness goes back to the 19th century, when its principal product was gunpowder and two du Ponts were killed by explosions. In the early days the company's mills blew up so regularly that they were built with three sturdy stone walls and one flimsy wooden wall, facing Brandywine Creek. When the inevitable explosion came, the wooden wall would blow out. The rest of the mill would remain standing and could be economically restored to service. "Going across the creek" became a company euphemism for being blown to bits.

Advancement through safety

Pierre Samuel du Pont, founder of the American branch of the family, set an example of top management involvement in safety in 1817 by leaping from his sickbed at the age of 77 to help put out a fire in a powder mill. Today, at the regular Friday meetings of Du Pont's top management in Wilmington, safety is always the first item on the agenda. The pattern holds throughout the company—safety comes first. Everyone understands that "a job will not be done unless it can be done safely," says James Kearns, a general manager of the textile fibers department. Supervisors and managers realize that without a good safety record, they just won't get promoted.

Du Pont's safety efforts reap enormous savings. In U.S. plants in 1980 the company had 129 accidents that caused workers to lose time from the job—an annual rate of .12 accident per 100 workers, or one-twenty-third the National Safety Council's average rate for all manufacturers. Had Du Pont's record been average, the company would have spent more than $26 million on additional compensation and other costs, using the Safety Council's estimate of $9,400 for the average cost of a disabling accident. That's 3.6% of Du Pont's profits. To make up the difference, in view of the company's 5.5% net return on sales, Du Pont would have had to increase sales by nearly $500 million. That seems reason enough to be fussy about safety.

RETAILING

The Man Who Makes Millions on Mistakes

One of the fastest-growing off-price merchants, Sy Syms converts excess inventories of brand-name apparel into bargains for the consumer.

by WALTER McQUADE

Packed with merchandise, the enormous new distribution center for the Syms chain of clothing stores stands in the middle of the New Jersey Meadowlands. A visitor there a few weeks ago departed from the second-story office of master apparel merchant Sy Syms only to realize on reaching ground level that he had left behind his own decidedly battered old raincoat. He climbed the stairs once more and opened the hall closet: no coat. Syms and an assistant came out to help search, but at first they too were unsuccessful.

"Sy," the assistant suggested jovially, "maybe we *sold* it already!"

The coat finally turned up in another closet, but the quip hit close to the spirit of storekeepers like Syms, who are known as off-pricers. They differ from ordinary discounters who buy at regular wholesale prices and simply accept a lower than usual markup. The off-pricers keep their selling expenses down to the discounters' level, but they also pick their way through the apparel industry maze to buy brand-name and designer-label merchandise at lower than normal wholesale. Some manufacturers call off-pricers undertakers. Whatever you call them, these pipe-rack boys in drab, windowless stores offer the same goods for roughly half the price at which they are sold by hushed specialty shops.

This is a nervous time for most of the clothing business, but unlike their more conventional competitors, the off-pricers have been selling just about everything they can lay their hands on—and making excellent money at it. Off-pricers are proliferating; they moved an estimated 6% of the $85 billion of clothing sold to Americans last year.

Syms, one of the fastest growing in the business, has ten large stores in eastern cities from Boston and Buffalo in the North to Fort Lauderdale in the South. (For the other leading off-price chains, see page 110.) FORTUNE estimates that Syms stores last year sold $115 million in merchandise (not counting sales taxes) for an after tax profit of about $10 million. Perhaps more remarkable, in a business that is usually in hock to the hilt, Sy Syms, the proprietor, asserts that he borrowed not one cent to acquire his inventory; purchases were all paid for, and promptly, out of cash flow, without even short-term loans.

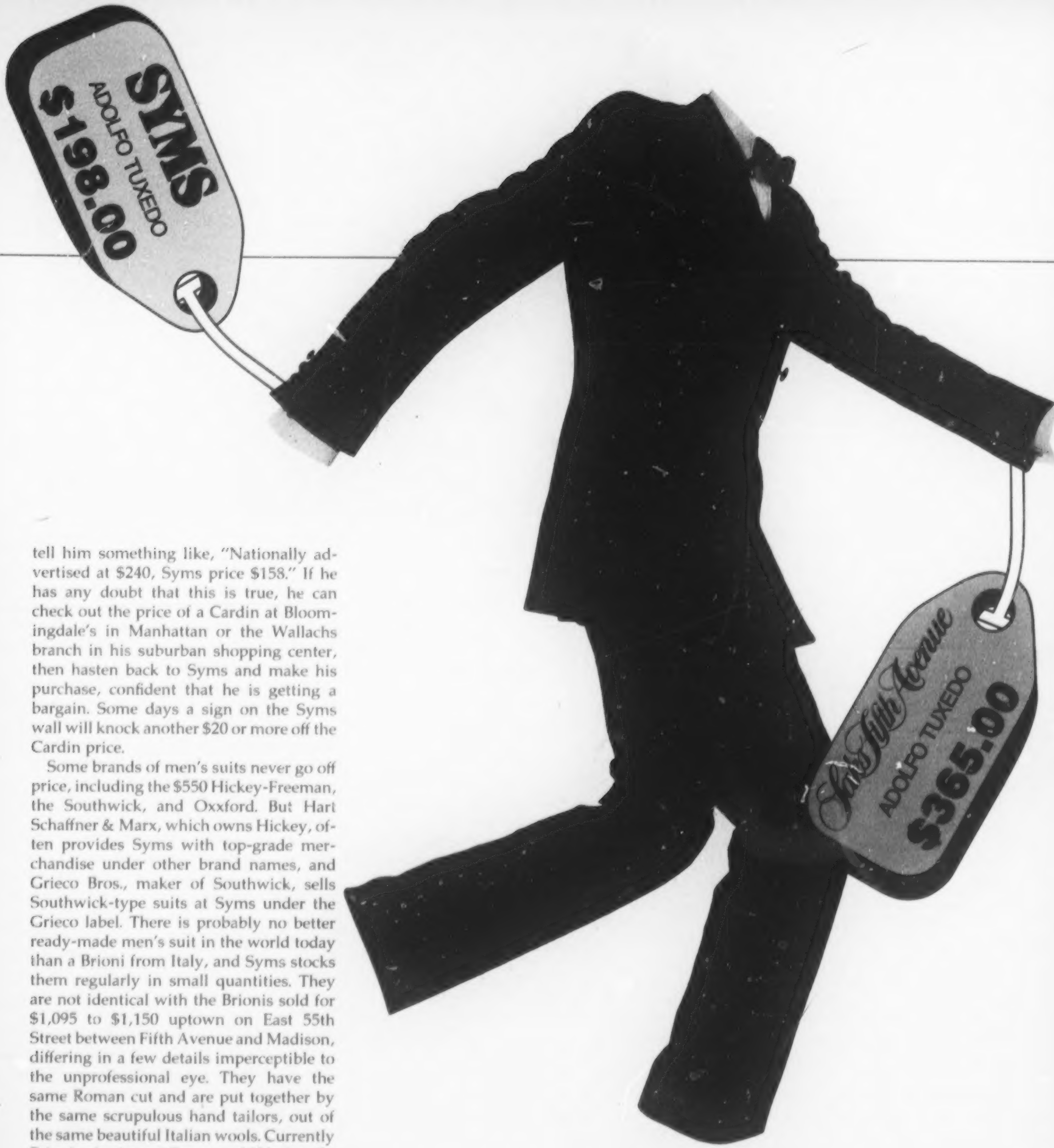
At 56, Syms is an ebullient man of medium height who talks like the radio announcer he once was, but with a residual Brooklyn accent. He has off-price selling in his blood. His father, the late Morris Merns, was for years Cluett Peabody's independent distributor of discontinued styles of the old, stiff Arrow collars. (Syms's bright daughter Marcy, the oldest of his six children and today a key business assistant, was named after the Arrow Marcy collar worn by Herbert Hoover.) Syms's older brother, George Merns, is in the more conventional discount clothing business in Manhattan, where he owns two Merns Mart stores, operated by his son. Following seven years in broadcasting, Sy worked with his brother in retailing during the 1950s; in 1960 he broke away to try a few ideas of his own, and changed his business name to Syms by combining Sy with the first and last letters of Merns.

Scissoring the labels

Off-price retailing got its start in the U.S. in 1920, when Loehmann's set up a cut-rate back-door outlet in Brooklyn for "better" women's wear that had been stitched in the Manhattan garment district and hitherto sold only through dignified department stores like Saks Fifth Avenue, Best's, and Lord & Taylor. Disturbed at being undersold, these stores put pressure on the manufacturers, who in turn persuaded Loehmann's to scissor all manufacturers' labels from their merchandise so customers could not be sure what they were getting. This practice persists today in the 56 Loehmann's branches scattered across the country, although astute shoppers have long since broken the price-tag code identifying the manufacturers.

Two essentials distinguish the way Sy Syms runs his off-price enterprise. The first is bargain prices; the second is selling brand-name merchandise recognizable to the buying public. The first Syms stores went into business on Manhattan's Lower West Side in 1960 and then, as now, were oriented mainly toward men's wear. A shopper at Syms who likes the cut of a certain suit will note from the label on the sleeve and the initialed lining that it is, say, a Pierre Cardin. The price tag will

Research associate: Katharena Leanne Zanders



tell him something like, "Nationally advertised at $240, Syms price $158." If he has any doubt that this is true, he can check out the price of a Cardin at Bloomingdale's in Manhattan or the Wallachs branch in his suburban shopping center, then hasten back to Syms and make his purchase, confident that he is getting a bargain. Some days a sign on the Syms wall will knock another $20 or more off the Cardin price.

Some brands of men's suits never go off price, including the $550 Hickey-Freeman, the Southwick, and Oxxford. But Hart Schaffner & Marx, which owns Hickey, often provides Syms with top-grade merchandise under other brand names, and Grieco Bros., maker of Southwick, sells Southwick-type suits at Syms under the Grieco label. There is probably no better ready-made men's suit in the world today than a Brioni from Italy, and Syms stocks them regularly in small quantities. They are not identical with the Brionis sold for $1,095 to $1,150 uptown on East 55th Street between Fifth Avenue and Madison, differing in a few details imperceptible to the unprofessional eye. They have the same Roman cut and are put together by the same scrupulous hand tailors, out of the same beautiful Italian wools. Currently Brioni price tags at Syms read "Nationally advertised at $650, Syms price $298."

This labeling is part of Sy Syms's campaign to produce what he calls "the educated consumer"; to the same end he has also gone back to the airwaves, each year spending 1½% of his previous year's gross

Identical Adolfo tuxedos were recently selling at elegant Saks and inelegant Syms for poles-apart prices.

Photograph by Kim Steele

What Sy Syms is telling the public in this TV spot is that there is never a sale at Syms. His prices are low all the time.

on strategic TV and radio spots. Facing the TV camera, he intones messages such as, "At Syms an educated consumer is our best customer. I'm Sy Syms, and if a garment doesn't have a recognizable name on it, it's not advisable to buy it." Marcy Syms recites the women's ads, and one of the three sons in the business also appears. Syms writes the copy, which is simple and plainspoken (he says he doesn't want "any cutesy kickers") and 100% institutional rather than item oriented. Syms has promised his suppliers he will never use their brand names or quote specific prices outside his stores. Were he to do so, the suppliers' other customers—department stores and other straight-price outlets—would howl.

Shooting dice twice a year

In the off-price business, getting merchandise is as important as selling it, so Syms is good to his suppliers. He is constantly on the phone to them in his New Jersey office. Marcy says, "I tell Sy, 'Why don't you have someone else answer the phone?' He says, 'Naw, naw, it's all right.' He answers every call; it's wonderful—and he demands that every one of his ten buyers do too. He says, 'I don't care if that guy's been bothering you and you never made a deal with him. Every time he calls, you should answer his call because you never know when it's just the thing we want, we need, at the right price.' "

Syms has been courting manufacturers for more than 20 years, but the affair has become mutual; they recognize he is important to them because the clothing business can be very risky, especially since it congenitally overproduces. A suitmaker, for example, must decide which piece goods (fabrics) to order from the mills and in what quantity 18 months before the final product is to appear in stores. In the words of one manufacturer, "We're shooting dice twice a year."

If the market sours, the manufacturer may not book enough orders from his regular outlets to use more than half the fabric; he is then faced with unloading the remainder of the piece goods. He can sell them to a jobber for about 20% of what he paid for them, or he can call an off-pricer. The off-pricer will often pay full price for the piece goods on the condition that the manufacturer agree to "chop up" the goods—in trade jargon, cut to pattern—and make them into garments at cost. Besides letting the manufacturer off the hook of insolvency, this kind of deal permits him to keep his plant operating and retain his labor force.

As for the off-pricer, he gets his merchandise for less than what the usual retailers pay and can mark it up less because of low overhead. Most retailers have to mark a $75 garment up to $150. The off-pricer may pay only $50 for the same garment and mark it up to only $75.

Today much of the clothing sold in the U.S., particularly what the trade calls furnishings or haberdashery, is manufactured in the Far East under circumstances that provide still further opportunities for the astute off-pricer. First the importer—usually an American manufacturer—must place mass orders, say for 10,000 dozen shirts or blouses, thinking he has them presold to retailers. But maybe the shipment comes in a little late and the stores refuse to take all the shirts or, if business has been sluggish, any of them. The sparring between suppliers and stores is rough in a tough economy. "They're cruel out there," says one maker of trousers.

So the importer is stuck with the goods. One shirt manufacturer, who declines to be identified in print, recalls that some 16 years ago Syms had been soliciting his company for overruns. "I fended him off," says the manufacturer. "You couldn't help liking the guy, but you can't get to seeming promiscuous in where you put your product. Then I suddenly had 5,000 dozen shirts on my hands, and no orders. So now I'm hurting."

He goes on: "You have to bite the bullet and get rid of mistakes. I called Sy and dickered." He has been selling Syms many of his miscalculations ever since. This manufacturer says Syms is the best off-price company to do business with. "A soft touch he's not," he says, "but he doesn't gouge. He keeps his commitments."

Perhaps best of all, Syms is swiftly available and will move fast, paying within ten days when one of his old manufacturing friends is in a bind. "If I closed my doors," says Syms, "the customers would find somewhere else to shop, but many of my dear suppliers would be hard pressed to replace my company."

The long professional bonds have become personal. Syms plays tennis five or six mornings a week with a group of executives who sit in 1290 Avenue of the Americas, headquarters for most of the men's-wear manufacturers in the country. He shares their fetes as well as their failures, and their charities, which is important. The men's-wear manufacturing industry is largely Jewish and is proud of its charities, which range from helping educate underprivileged children in Catholic schools to supporting Boys Town of Jerusalem. At a luncheon in New York in June honoring Prime Minister Menachem Be-

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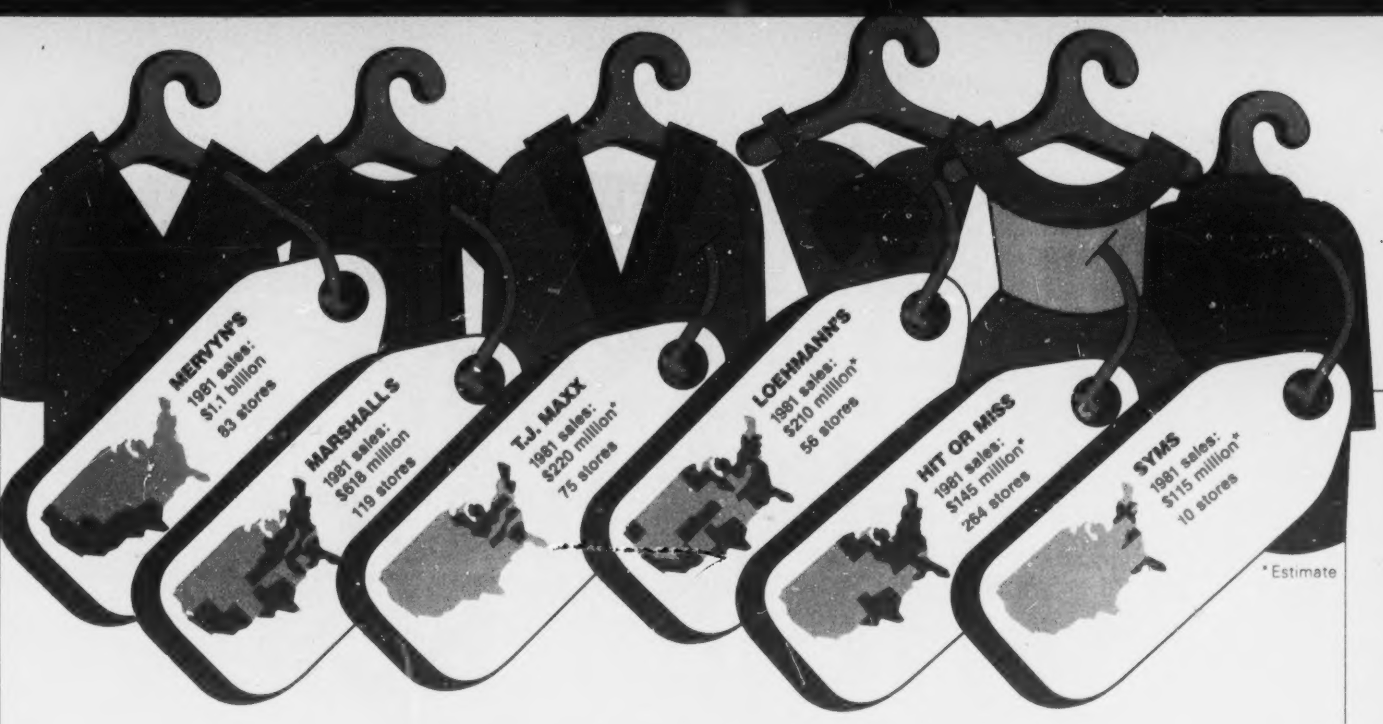

The Big Six Off-Price Chains

Not only are agile small companies doing well in the off-price apparel business, so are adroit large corporations. The giant in the field is Mervyn's, a division of Dayton Hudson, whose 83 off-price stores racked up $1.1 billion in sales last year. Next largest is Marshalls, owned by Melville Corp., and then comes Zayre Corp.'s two off-price chains, T.J. Maxx and Hit or Miss, whose 339 stores combined to gross $365 million. The small U.S. maps indicate the geographic concentration of each chain.

Beyond the leaders is a constellation of off-pricers, both individual stores and multiples. F.W. Woolworth has an entry in the off-price stakes: J. Brannam stores. In the past two years 36 Brannams have opened, and although they have not yet broken the $100-million sales mark, they are successful enough that Woolworth has decided to open 90 to 100 more in the next four years.

Some big discount chains—K mart, Caldor—have apparel departments in their stores, but these seldom qualify as true off-pricers. Most of their apparel is not famous brands and is bought at regular wholesale prices and simply sold at low markup. In addition, many manufacturers own outlet stores that offer only their own products, ranging from Cole-Haan shoes to the Izod alligator shirt.

As the off-price business grows, competition is rising among stores seeking to supply themselves with manufacturers' overproduction and returns. Because the clothing business has been hit hard by recession, a lot of overproduction is available. But when the regular retail outlets begin to spin happily again, some off-pricers without strong established ties to manufacturers may find their pipe racks bare.

gin of Israel, the State of Israel Bond Organization asked the audience for pledges to purchase Israeli bonds. The Bronfman distilling family led the response by pledging $250,000. It gave Sy Syms a lot of pleasure to be able to throw in $100,000. That secretive shirt manufacturer sums up his feelings about his customer: "He's an honorable, decent person, a responsible member of the community."

Syms himself, despite worldly success, is just a little restive with his role. He chafes at sitting behind his desk in New Jersey dealing with lawyers and real estate people, plotting the company's further expansion. He is happiest when he gets out into the aisles of his stores, merchandising. Almost as a hobby, he bought A. Sulka & Co., one of the poshest retailers in the country, and he drops in on one of the Manhattan stores almost daily (see page 116). At least once a week a limousine—with a telephone to keep him accessible—carries him on inspection tours of Syms.

The Syms stores resemble the usual roadside discount house in several ways. They are anything but luxurious, with dimly lit communal dressing rooms (no separate stalls), long lines at checkout counters, and few amenities of any kind. The sparse help is paid straight salary, no commissions. There is no investment in mannequins to show off the merchandise, nor are there free alterations, gift wrapping, or deliveries. Customers are as often as not handed their purchases in paper bags. Only one credit card is accepted: Syms's own. Syms economizes still further by situating stores in out-of-the-way places, trying to stay away from shopping centers, which generally demand a percentage of the tenant's gross in addition to rent. Yet the Syms parking lots have more than their share of Mercedeses and Cadillacs. Affluent people like bargains too, especially stylish bargains.

When his driver deposits Sy at a Syms, the owner takes to the floor of the store with obvious pleasure, rearranging the garments on their racks, sometimes instinctively changing prices, pleading with managers to have the corners swept. Syms finds his greatest pleasure is much more in the process than the bottom-line results, as long as those are in the black. Says one of his divisional managers, "Financially, we fly by the seat of our pants."

The off-pricers are having a strong impact on the brand-name clothing market. A generation ago the names of renowned

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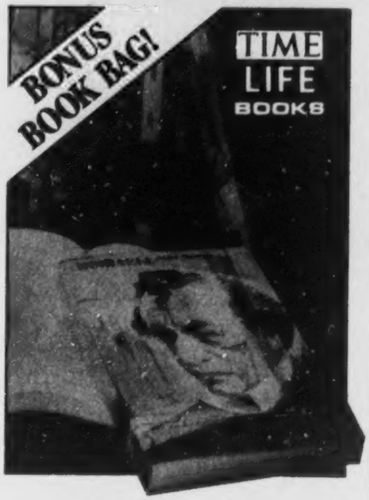

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The designers are wagging the industry.

department stores—Lord & Taylor, Marshall Field, Neiman-Marcus—were what gave clothes cachet. But today the designers are wagging this dogged old industry. The change began in the male clothing business when women's-wear designers such as Pierre Cardin, Yves Saint Laurent, Bill Blass, and John Weitz moved in.

Perhaps the most potent of all has been Ralph Lauren, born Ralph Lifshitz. Less than 20 years ago he left a job selling haberdashery at New York City's Brooks Brothers to become an on-the-road salesman for a necktie maker. Before long he was selling his own brand, manufactured on contract by his former employers, and soon added a line of expensive men's sportswear. A genius at styling, stubborn at maintaining quality, he then plunged into designing women's clothes. In due course came Lauren perfumes for both women and men, Lauren cosmetics, Lauren suitcases and shoes; he is currently moving into housewares. Using newspaper and magazine advertising, he has made the Lauren name, and his flamboyant visage, familiar throughout the republic. Lauren's success has been emulated by other designers: Adolfo, Oscar de la Renta, Halston, Geoffrey Beene, and particularly Calvin Klein. Klein is reported to be drawing, personally, $15 million this year; Lauren, $12 million.

Good goods, but late

Except for Lauren, who makes his top tailored clothing line, Polo, in his own factory, these designers do not turn out their own merchandise. They license their names and designs to manufacturers. Yet so powerful have the designers become with the public that they can and do deny exclusivity to any single store. One can buy a Calvin Klein at Bloomingdale's, at Saks Fifth Avenue, at Macy's—and at Syms too, only for a lot less money. The prestige of the designer lends credibility to the off-pricer: customers know they're getting good goods for less.

Off-price merchandise does tend to reach the store somewhat out of season. For example, Bloomingdale's will put Ralph Lauren's Polo suits for spring and summer on the floor in November of the previous year and have through mid-June to sell them, at $400 to $620 each. Sy Syms probably doesn't even get the Polo line until June 1. Moreover, if the manufacturer offers him 2,000 suits, they may not come in all sizes, and he cannot choose exact fabrics. Nevertheless, he can sell a Polo suit for half the Bloomingdale's price and still make a profit. Last year all the Syms stores together sold more than 150,000 men's suits bearing more than 200 well-known brand names.

The fastest turnover at Syms, however, is in a rather different item. Syms recently chortled at a question: "Quantities? Baby, you want to know quantities? Panty hose!—it's mind-boggling, unbelievable!" Last year he sold 1.4 million brand-name pairs: wholesale price, $1; Syms's price, $1.25.

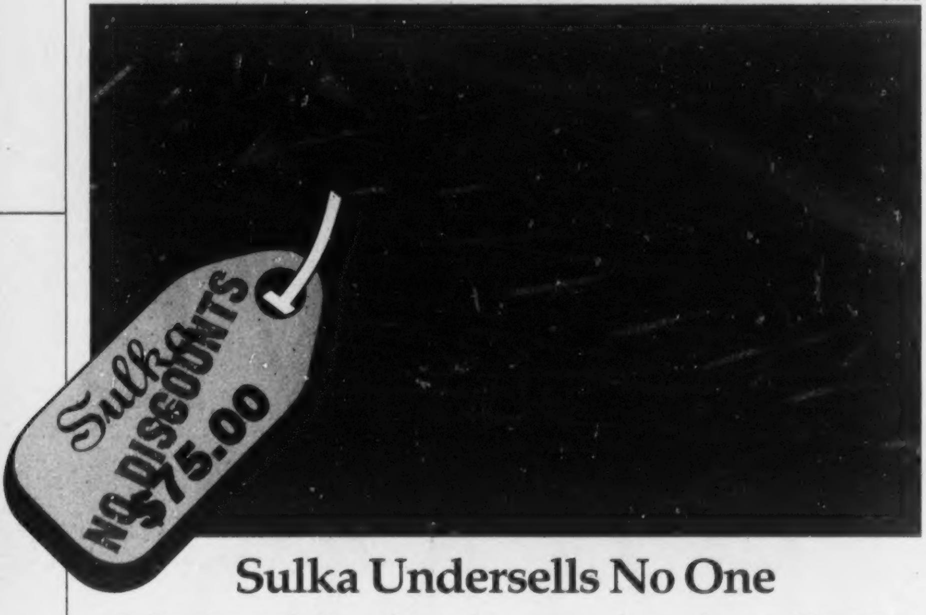
He missed the pipe racks

Some eight years ago Syms hired Ira Weiser, long famous inside the men's-wear business and a 30-year employee of the Manhattan emporium Barney's, which started as a concrete-floor, pipe-rack, off-price operation, but later, to Weiser's vague unease, became one of the city's more stylish and expensive specialty shops. Since coming to Syms, Weiser has worked out new, more sophisticated arrangements with suppliers to ensure that the voracious appetite of the Syms stores will be fed regular meals of prime merchandise. Weiser, whose title is divisional merchandise manager, will, for example, commission a manufacturer during an off-season lull to turn out 5,000 sports coats, a deal considerably sweetened for the manufacturer by Weiser's willingness to pay for them up front. Syms, with its enormous new warehouse, can also store clothing until the right season.

The whole clothing business is in much more than its usual turmoil this year. Small men's-wear shops are suffering particularly. A survey by the *Daily News Record*, Fairchild Publication's male twin to *Women's Wear Daily*, revealed last month

continued

Kim Steele



Sulka Undersells No One

Sy Syms has startled his colleagues in the off-price apparel trade by purchasing one of the world's most vaunted purveyors of exquisite men's furnishings. He bought the U.S. and London branches of A. Sulka & Co. in 1980; this month he agreed to add Sulka's remaining unit, in Paris. Sulka products have been famous in small circles since 1895, when a tailor named Amos Sulka founded the company in London. New York has two branches, San Francisco one. Perhaps the only embarrassment Sulka has suffered was the penchant big-time racketeers showed for Sulka silk shirts in the Gatsby 1920s.

Today Sulka's shop on Manhattan's East 55th Street is Sy Syms's own little store, the one he can oversee daily on the way from his Sutton Place apartment to the warehouse in New Jersey. The silver limousine waits across the street under the St. Regis Hotel canopy with the other big cars while Sy hones his merchandising skills by rearranging the window displays and seeing to other details. Sulka stocks such items as a $2,500 dressing gown of English cashmere lined with the purest silk. A smoking jacket of Italian silk brocade goes for $1,500. When Syms bought it, the store had run down just a little and the whole chain was unprofitable. Syms is determined to renew the image, lifting quality higher than ever and perhaps even pulling Sulka into the black. "You can be sure he'll do it," says Ira Weiser, one of Syms's important aides. "But there'll never be anything from Sulka in Syms but Sy's own necktie."

---

that more manufacturers and retailers are hovering on the bankruptcy brink than ever before in memory, including the clothing business's terrible mid-1970s and the even worse 1930s. The retailing score is being kept not just by seasons, but by months. "March and April were flat," says one men's wear maker, "May was great; I thought business had turned around. But June was a disaster."

How much this can be attributed to the rise of off-pricers is debated in the trade. "It's a whole new ball game in men's wear: top level, no middle, then Syms," says one prominent importer. "The little specialty shop is being ground between the big powerful department store chains on the top and the off-price stores underneath. The middle-range standard markup is disappearing."

Another testimonial to off-pricing's success is that almost all stores are getting to be a little more like the off-price ones. Buying agents have formed networks of isolated clothing stores around the country and stalk off-price merchandise in wholesale markets for these scattered clients. Department stores daily advertise a smashing surf of special sales. Some are fakes. Manufacturers complain that women's merchandise managers, even in prestigious stores, too often will buy a dress for $50 wholesale, mark it up to $195, then ballyhoo a big sale by marking it down to $100, the price at which it should have been offered the first time around. These cynical tactics drive away trade, the manufacturers complain. Says one, "You can fool shoppers individually but never collectively. They're going to get you every time. You can bullshit them to death, one by one, but collectively they know."

Syms stores maintain they have no sales, but "dividends" are announced frequently over the stores' public address systems, especially on rainy and snowy days. "We think we owe the customers a little favor for coming out in bad weather," says Syms. "Maybe they'll all be at home wondering what to do and someone will say, 'Hey, it's raining. Let's go over to Syms and see what the dividend is.' "

A distasteful prospect

Syms is still expanding. In September another big store will be opened in Maryland, and some people in the clothing industry expect the chain to spread into the Southwest before long. Whether Sy will be able to continue financing his own momentum is a question. He has had numerous offers from larger companies to sell out but is reluctant. It is a family business first, and Sy knows a buyer would insist that he go on running Syms, and he doesn't relish the prospect of doing it under higher authority. "If I was working for a conglomerate," he says, "would they let me buy panty hose for a buck and sell them for a buck and a quarter? Never."

He could conceivably raise capital for expansion by going public. There is lively interest in the off-price business in the financial markets. Last October the brokerage house of Smith Barney Harris Upham & Co. held a conference on off-price in New York. One conferee, C. William Ress, a prominent consultant on marketing for manufacturers and retailers, predicted that before long off-pricers would be selling 25% to 30% of all name-brand soft goods in the U.S. "They operate under the umbrella of credibility offered by the department stores," Ress said. "How do they do it? Buy low, sell fair." Not, as he added, bad advice for anyone.

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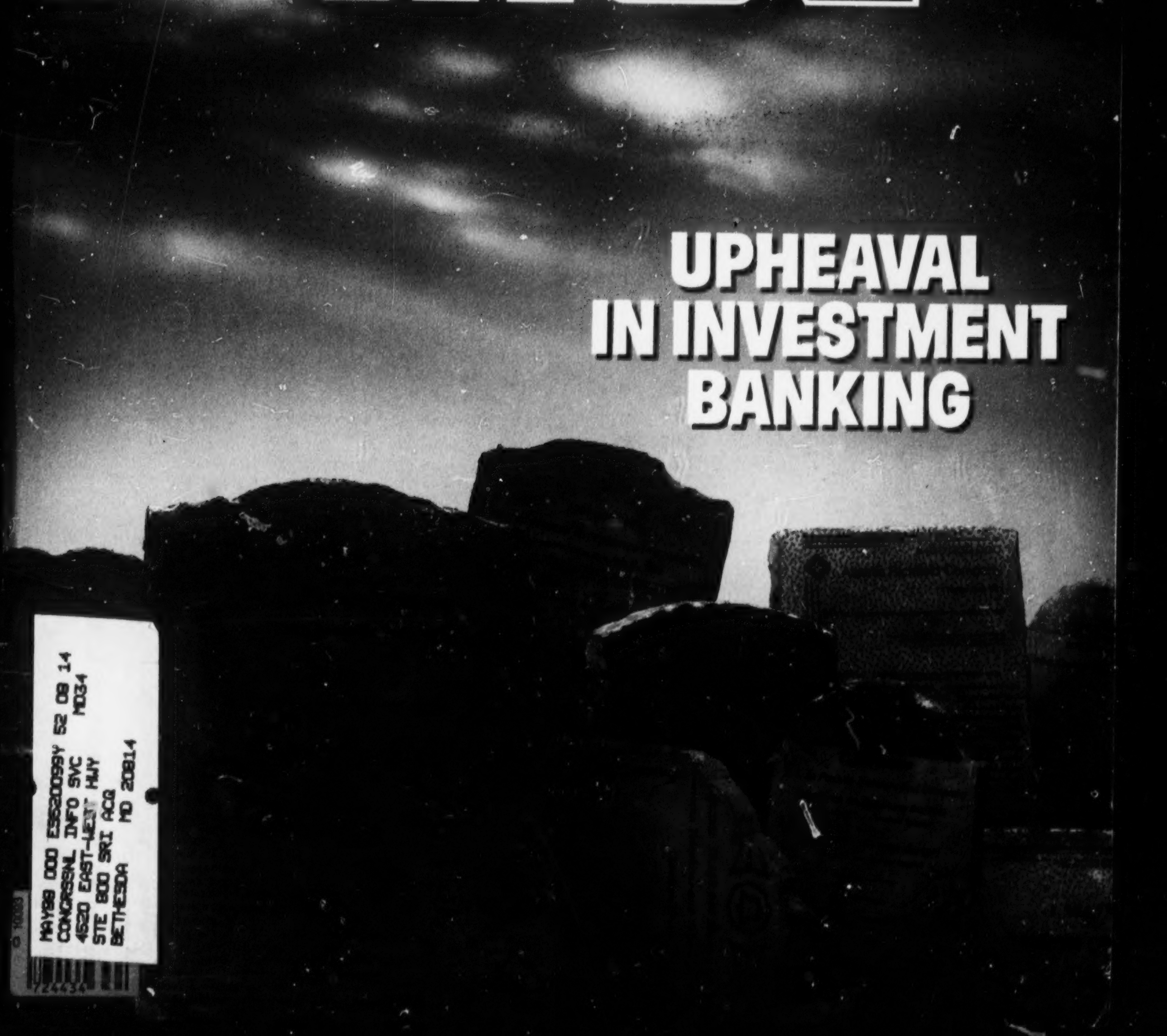

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UPHEAVAL IN INVESTMENT BANKING

Crumbling, tumbling tombstones evoke the mortal fear that strikes investment bankers contemplating wide-open price competition in underwriting. The construction, by Lenor Robinson, was photographed by Shig Ikeda. The article begins on page 90.

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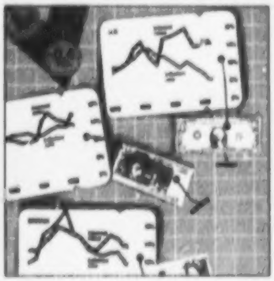

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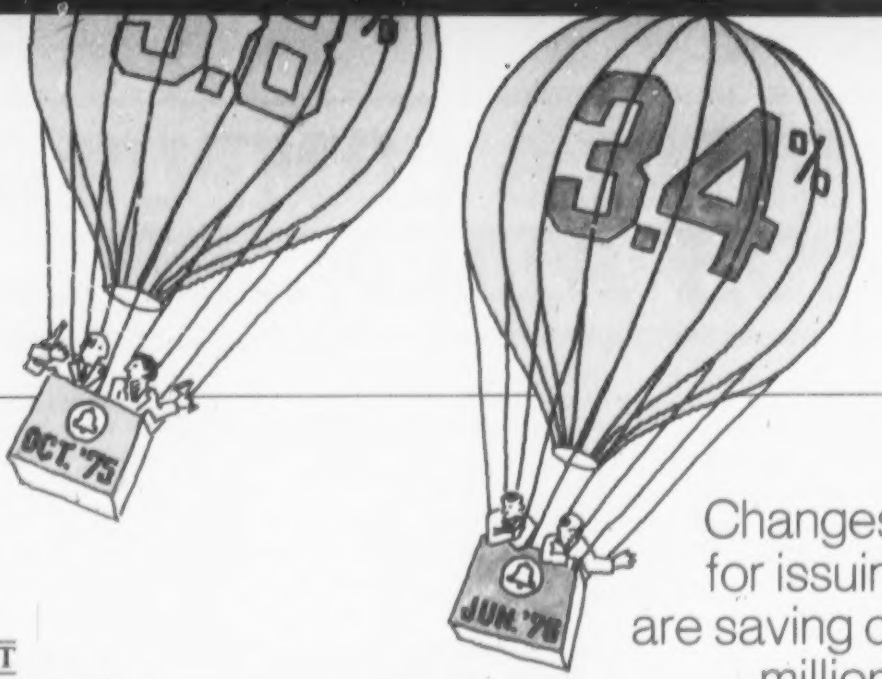

Changes in the rules for issuing securities are saving corporations millions and could make underwriters expendable.

WALL STREET

Upheaval in Investment Banking

by A. F. EHRBAR

Investment bankers, who in recent years have been competing in every conceivable way except by cutting prices, are swiftly adapting to a rude new state of affairs in the underwriting game: wide-open, profit-busting price competition. Bidding ferociously for new corporate securities, the bankers are cutting their fees for underwriting stocks and bonds to the lowest levels ever. The new competition promises to reshape the investment banking industry and radically alter the ways large corporations raise capital.

What's been happening to underwriting fees is strikingly apparent in the balloons overhead, which track "spreads" on the five AT&T stock offerings since 1975. The spread is the investment bankers' fee, negotiated with the client issuing the securities and generally paid from the money collected when the stocks or bonds are sold. When AT&T sold 18.1 million shares at $57 last year, the spread, stated as a percentage of the offering price, was 2.7%; investment bankers pocketed better than $28 million of the $1 billion raised. In contrast, Ma Bell's offering last May 6 carried no spread at all.

Another aspect of the AT&T deal, and other deals lately, has rocked Wall Street even more than the disappearing spread. Morgan Stanley pulled off the AT&T offering, as a "bought deal," a European technique that most underwriters would like to see embargoed. In a bought deal, one or a few investment bankers usually handle the entire offering without lining up buyers in advance. That's radically different from a conventional offering, in which a lead (or managing) underwriter puts together a syndicate of securities firms from all over the country to buy an issue and market it to the public. Syndicates usually include at least a dozen firms, and often 60 or more. The firms agree to sell the securities at a single fixed price until the syndicate is broken, which occurs once the issue is sold or—if an offering bombs—when discounting is needed to attract buyers. In the latter case the spread, built into the offering price, cushions the underwriter against loss unless the price drops more than the spread.

The AT&T deal had neither syndicate nor cushion. Morgan Stanley simply bought two million shares on its own at $55.40 after bidding against a score of other underwriters. Morgan then resold the shares to institutional investors and other securities firms for whatever it could get. It netted around $400,000 on the deal. At last year's spread, fees on the AT&T shares would have been $3 million.

Research associate: John J. Curran

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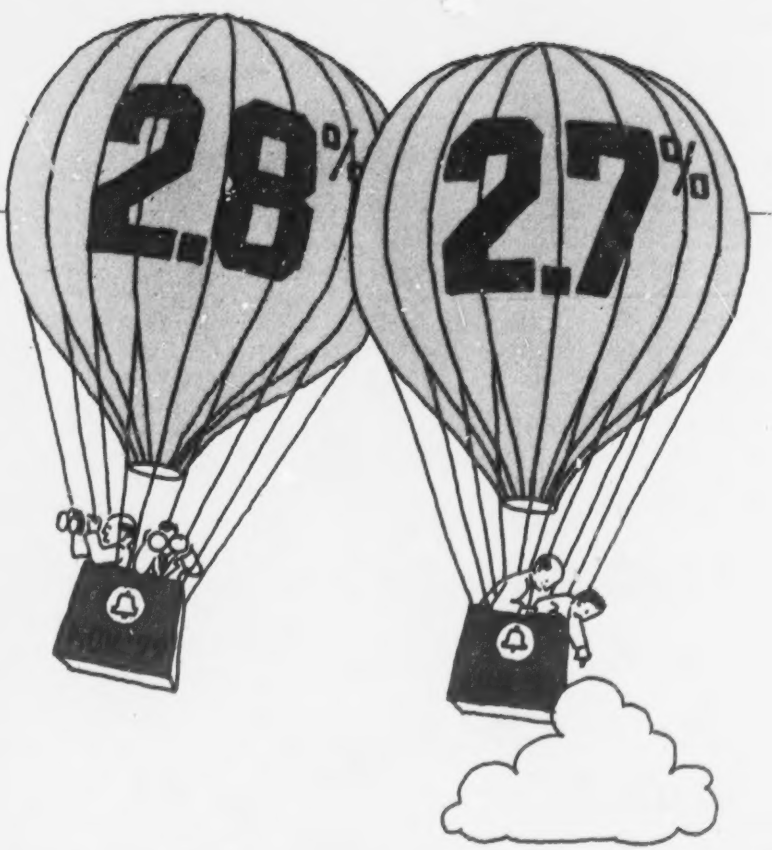


Because of the extreme risks, investment bankers recoil at the thought such deals will become commonplace. In conventional offerings the lead underwriter lays off a considerable part of the risk on the other members of the syndicate, just as a bookie lays off large bets. The managing underwriter also has all those extra salesmen in the syndicate firms working the phones to move an issue before market conditions change. In a bought deal, however, the underwriter has, as they say, bought the whole thing. The bought-deal underwriter also keeps all the profits if a deal is successful, but even that is controversial. Firms accustomed to participating in syndicates don't relish being cut out of the action. Lately a lot of utility-stock offerings have been handled as bought deals, and regional securities firms, which used to peddle loads of utility shares, are getting bypassed.

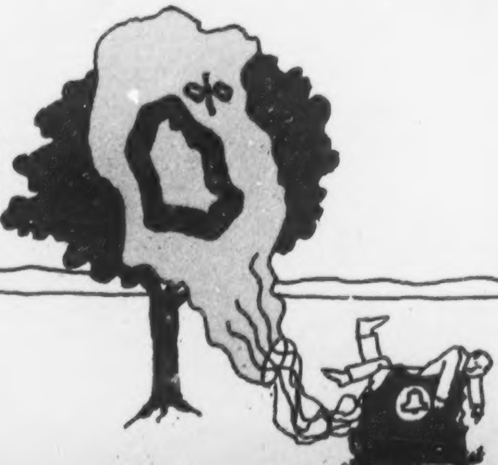
Underwriters also view bought deals as a threat to the last remaining vestige of fixed prices in the securities business. Though seven years have passed since the Securities and Exchange Commission outlawed fixed minimum commissions on ordinary trades, the fixed-price underwriting has remained sacrosanct. As it happens, most bought deals so far have been resold to investors at a single price, just as in a fixed-price offering. But they needn't be, and a few have been done with variable prices and volume discounts for big buyers. Morgan, for instance, resold the AT&T shares at prices ranging from $55.45 to $55.65.

Beware a freer market

All this upheaval in underwriting is the result of some major relaxation of the SEC's rules governing new offerings—rules that had helped sustain the syndicate system and discouraged price competition. Like other businessmen who have faced the specter of deregulation (and lower profits), many investment bankers are claiming that a freer market for new offerings will hurt not just them, but everybody.

The piece of deregulation that distresses underwriters most is Rule 415, the SEC's shelf-registration rule that went into effect on a nine-month trial basis in March. Rule 415 allows companies to register all the securities they plan to issue over the following two years and then sell some or all of them "off the shelf" whenever they choose. Any company can use a shelf registration, but it appeals most to large corporations that sell securities frequently.

Shelf registration enhances the flexibili-



Those balloons show the underwriters' fees on AT&T's last five public stock offerings, expressed as a percentage of the money raised each time. As the balloon at right indicates, the underwriter (Morgan Stanley & Co.) got no fee in May when AT&T made the first public offering under a controversial new "shelf registration" rule.

John Haines

ty of issuers and promotes competition among underwriters in a couple of critical ways. First, once its registration statement has been cleared, a company can make a series of instantaneous offerings without waiting for the SEC each time—extremely valuable in the bond market when interest rates are volatile. Equally important, companies no longer have to settle on a managing underwriter before they register an offering. Instead they can simply list a lot of managers they'd be happy to have. This encourages the firms listed to make competing offers. That's bound to produce lower underwriting profits than the old practice of negotiating a spread with an investment banker already tapped to handle the job.

Though Rule 415 was the agent of revolution, the vast majority of unconventional deals since March have not been shelf registrations. The adoption of Rule 415 focused the attention of underwriters and issuers on a variety of innovative deals that could have been done for years. The device that's been used for nearly all the unconventional offerings is the short-form registration and prospectus that's been available to large companies since 1978. The short form is a bare-bones document that needn't contain much more than the company's name and address. All other relevant data—income statements, balance sheets, and the often numbing, sometimes revelatory "material information" that can make prospectuses so lengthy—are "incorporated by reference" from the form 10-K and other material the companies routinely file with the SEC.

The short form obviously saves a bundle in printing costs. More important, the SEC will allow companies using it to sell securities 48 hours after filing the registration statement. Before the short form came along, companies sometimes had to wait a month for SEC clearance. Most underwriters viewed the short form as a handy way to get through market windows—those brief periods when interest rates drop, only to shoot back up again. Few saw it as a device that could fundamentally change underwriting. Although a handful of insurrectionists—most notably Jefferies & Co., a Los Angeles broker—used the short form to do bought deals last fall, it wasn't until 415 came along that the action got heavy.

The chief instigator of the new rule was Lee B. Spencer Jr., director of the division of corporation finance at the SEC. In 1980 Spencer and his staff were wrapping up a major simplification of SEC rules and guidelines when they hit on the idea for Rule 415. Wall Street appears to have napped through most of the preliminaries that led up to the experiment. But this June, four months into the trial, the investment bankers had their say at five days of hearings in a jam-packed room at the SEC.

Speaking through the Securities Industry Association, the investment bankers asked the SEC, in effect, to repeal 415 and to outlaw 48-hour offerings. The SIA argued that a "cooling-off period" of five business days was needed between the filing of a registration statement and the sale; that would give underwriters a chance to investigate the issuer and investors time to ponder the offering. The SIA also urged that a lead underwriter be selected five days before selling. In other words, the SIA wanted the SEC to recreate the conditions that sustained the old system. Underwriters wouldn't end up bidding against each other, and deals would be done at the leisurely pace that facilitates the forming of syndicates.

Most aggrieved were the regional firms, which deal mostly with individuals. National stock offerings are an important source of merchandise and profits for them, and bought deals have cut off much of the flow this year. The regionals predicted that if individuals were robbed of the chance to buy new issues, they would desert the stock market altogether. Those testifying never made clear why investors should like new stocks so much better than used ones, though it's obvious why the regionals prefer them: spreads on new issues are higher than commissions on stock trades.

"We adapt"

Attacking shelf registration put many of the big investment houses in the awkward position of criticizing the kinds of deals they had done themselves. For instance, Peter Buchanan, president of First Boston, is co-chairman of the SIA's underwriting committee and played a large role in formulating its position. Yet in June 1980 his

How They Line Up

Salomon Brothers was the No. 1 corporate underwriter domestically in the first half of 1982, as it was in 1981. This year U.S. companies have been raising a lot of money abroad, where rates have been lower. When foreign financings are counted, Morgan Stanley moves up to second place, Merrill Lynch drops to fifth, and First Boston moves to third, ahead of Goldman Sachs. In general, the capital-rich firms have an edge in the new underwriting environment.

Total corporate underwritings in U.S. 1st half 1982[1]		Firm (1981 rank)	Firm's capital 1981[2]
Rank	Millions		Millions
1	$3,475.1	Salomon Brothers (1)	$ 719.1
2	2,800.3	Merrill Lynch (3)	1,264.0
3	2,666.9	Goldman Sachs (4)	389.0
4	2,637.7	First Boston (5)	220.9
5	2,030.6	Morgan Stanley (2)	204.0
6	1,203.2	Lehman Brothers Kuhn Loeb (6)	161.9
7	888.4	Paine Webber (8)	240.3
8	697.5	Kidder Peabody (7)	128.5
9	621.3	Drexel Burnham Lambert (9)	173.3
10	487.2	Dean Witter Reynolds (10)	305.6

[1] Includes issues by foreign governments. Value of entire offering assigned to lead manager.

[2] Includes equity and subordinated debt.

Sources: Securities Data Co. and Securities Industry Association.

She Has Reservations About His Brainchild

Barbara Thomas, 35, is one of three SEC commissioners who will decide the fate of shelf registration, and the least enthusiastic about it. A former securities lawyer, she says, "I started out very pro shelf," but now she fears the rule may make it hard for underwriters to investigate corporate issuers thoroughly.

Lee B. Spencer Jr., 38, the chain-smoking director of the SEC's division of corporation finance, was a chief architect of "instant underwritings." He isn't shaken by arguments that companies will use the procedure imprudently: "In the end, you may have to conclude that corporate America can handle its own affairs."

Michele Singer (2)

firm did the first bought deal in the U.S.—a $250-million Citicorp bond issue—and boasted about it in its annual report.

John Whitehead, senior partner of Goldman Sachs, has been the most vocal of all the shelf-registration critics. He argues that investors get too little information in short-form prospectuses and he wants the SEC to go to a ten-day cooling-off period. Goldman, nevertheless, has been involved in nearly a quarter of all the nontraditional deals this year. Whitehead says he doesn't have any problems with the inconsistency between actions and words. "We adapt to the ground rules whether or not we like them," he explains. "We've been very active under 415. That's where I get my information that it's bad for investors."

Major underwriters complain that instant offerings could permit herds of companies to try to rush through every window in the bond market, as now happens in Europe. Unexpected bunching of issues in the European new-issue market sometimes causes such fear of a price drop that no one will buy. In addition, an underwriter doing a bought deal has to put up more capital than would be required if the firm were a member of a syndicate. Since the major underwriters include all the biggest bond trading firms, liquidity in the secondary market might diminish if capital were pulled out of trading and shunted into bought deals.

Proponents of shelf registration, who include large corporations and even a few investment bankers—notably Lehman Brothers Kuhn Loeb and Dean Witter Reynolds—argue that fears about liquidity are vastly overblown. Taking a line from those who oppose gun control, Donald Howard, chief financial officer of Citicorp, contends that "415 doesn't cause bunching. The market causes bunching."

Looking for cooked books

Underwriters also worry about what is known as "due diligence," the investigation they're supposed to perform to ensure that a company hasn't cooked its books or hidden bad news that could affect its securities. Investment bankers take due diligence seriously; they're liable for damages if an issuing company defrauds investors. Reasonably enough, they'd like to be relieved from liability for the accuracy of information included by reference in registration statements. But it's unlikely that a five-day cooling-off period would produce many revelations about large companies that security analysts haven't uncovered already. Says Lee Spencer: "If the 10-Ks and other filings are adequate to protect investors in the secondary market, where the annual volume is enormous, they ought to be adequate for the much smaller primary market."

The fate of Rule 415 will be decided by three SEC commissioners instead of the usual five. Commissioner Philip Loomis retired just before the hearings. Chairman John Shad, whose assets are managed in a blind trust by a Morgan Stanley executive, removed himself from the issue to avoid any appearance of a conflict of interest. At this point it's impossible to predict whether the commission will modify Rule 415, but given the SEC staff's strong support of it, some form of shelf registration for public offerings will almost certainly become permanent.

In the new world of instant offerings, the underwriter's role most likely will become more like that of a trader. Indeed, it's difficult to distinguish between bidding for bonds off a shelf and making a block trade. Capital, always a crucial commodity in underwriting, will become more important as syndicates dwindle. So shelf registration will favor the firms already on top,

continued

Wall Street Worries: No Protection, No Whistles

John Whitehead, 60, senior partner of Goldman Sachs, has become Wall Street's severest critic of shelf registration. He argues that the new procedure will seriously undermine investor protection and calls it "the ultimate abandonment of responsibility."

Thomas A. Saunders III, 46, of Morgan Stanley worries about buying a bond offering just before a passel of other issues hits the market by surprise. "Anybody can get out of the way of a freight train, but it helps if it blows a whistle."

William Coupon (2)

the ones with the most capital and the best trading operations. But the big firms will have to live with the risk that a flood of issues will hit the market unexpectedly and temporarily drive interest rates up—and bond prices down—just after they've taken on a large offering. Says Thomas A. Saunders III, who oversees syndicate operations at Morgan Stanley: "When you don't know who's going to land on your head in ten minutes, who wants to own $300-million worth of anything?"

Underwriters doing bought deals will inevitably come up with ways of recouping some of the profits lost from lower spreads. The latest AT&T offering showed off some new wrinkles in this regard. AT&T had registered ten million shares, so eight million remained on the shelf after Morgan Stanley's purchase. Morgan guessed preventing that overhang from coming to market might help AT&T's price, so it put a proviso in its May 6 bid that the company not sell any more shares before June 1. In return, Morgan bid 15 cents over AT&T's closing price of $55.25.

Morgan Stanley also wangled a small profit for itself in the way it arranged payment for the stock. The firm resold the shares to other brokers and institutional investors for delivery on Thursday, May 13, but it didn't settle up with AT&T until Friday, the 14th. On Thursday, Morgan borrowed two million AT&T shares, mostly from a Kuwaiti portfolio it manages, and delivered those shares to its customers; it paid a fee for the privilege. On Friday, Morgan took delivery from AT&T and replaced the borrowed shares. Morgan already had collected from its customers, but the $110-million check it gave AT&T wasn't good until Monday. Thus Morgan was able to lend the money out over the weekend and pick up more than $100,000, or 5 cents a share, in interest.

When a bought deal turns bad, though, the damage can be enormous. Kidder Peabody, for instance, paid $24.025 a share to buy one million shares of Indianapolis Power & Light off the shelf on May 13. The stock promptly dropped below $24, and Kidder didn't begin reselling the shares until early July, when the price was still down. Kidder won't say how it came out on the deal, but it may have lost $500,000 while tying up more than $24 million of its $129 million in capital.

Corporations that put securities up for bid won't save money without sacrifice. They will have to do without the investment bankers' counsel on financial matters, including advice on what type of security to sell. All they'll get from underwriters is a transaction service and a commitment of capital, though that's all many managements want. Corporations will also have to acquire the savvy to know when to sell and whether the bids they get are on the money.

The experiences of Illinois Power offer good examples of how the new system is likely to affect both issuers and underwriters. In early February, Damon Mezzacappa, a Lazard Frères partner, approached the utility with a proposal to handle a quick offering of up to five million shares. Illinois Power had been planning to sell stock, but its traditional underwriters, Merrill Lynch and First Boston, weren't as optimistic as Lazard about market conditions. Since Lazard also offered to do the deal at an attractive spread, Illinois Power went ahead with a four-million-share offering. The company filed a short-form registration on Thursday, February 25. Lazard lined up tentative buyers on Friday, set the price at Friday's closing level of $20, and finished the sale Monday morning. The spread was 2.35%, less than half the 4.86% Illinois Power paid on a three-million-share offering last year, a saving of about $2 million. Lazard picked up a quick $1.9 million. Mezzacappa says he doubts Illinois Power, or just about any other company, would have even considered such a proposal five years ago.

Three months after the stock offering, Illinois Power filed a shelf registration for $75 million of debt securities of unspecified maturity. It listed eight potential managing underwriters, all of whom made offers on June 4, the day the registration statement became effective. Not knowing what kind of paper Illinois Power really wanted to sell, each firm submitted a package of bids for everything from five-year notes to 30-year bonds. Illinois Power didn't accept any of the bids, which convinced Wall Street that the utility had blown a fuse trying to sort out all the proposals. Larry Haab, the company's treasurer, insists he could have selected a bid if the price were right, but interest rates climbed unacceptably in the few days after the registration was filed.

After that, Illinois Power established guidelines for bids—less than 16% on bonds, 15% on notes—and waited for rates to drop. The company finally got an acceptable bid from Salomon Brothers on the morning of July 9. Salomon bought eight-year notes that carry an effective cost to the company of 14.98%. Salomon's price was a bargain for Illinois Power, well above the market for similar notes with the same coupon and maturity, but the firm gambled that a bond rally begun the day before would continue. Salomon was wise: it managed to resell the notes at a profit of around $400,000.

Institutions as underwriters

Over the long run, shelf registration could reshape the new-issue market more profoundly than anyone on Wall Street is prepared to acknowledge. One innovation that might catch on, to the detriment of underwriters' profits, is a plan by Pacific Gas & Electric to sell 30,000 shares a week, at whatever the market price happens to be. Goldman Sachs has agreed to sell the stock for 25 cents a share, only a little more than 1% of the recent market price.

Even more chilling to underwriters, companies could start selling registered securities directly to investors. Institutional investors haven't stepped up to bid yet, because anyone who makes the initial purchase of a security may be stuck with the underwriter's liability. The American Council of Life Insurance and Scudder Stevens & Clark, an investment manager, have asked the SEC to lift the liability from anyone who buys for investment rather than immediate resale. Spencer says the commission will do something soon to clarify the issue.

As the new world unfolds, it's entirely possible that large companies and institutions may transact a fair amount of new-issue business without any underwriters participating. And when the underwriters do get involved, they may be working for fees that aren't much higher than the measly commissions they now get from institutional investors.

William Coupon

First on the Shelf—and Still There

Donald Howard, 54, chief financial officer at Citicorp, thinks shelf registrations are great. Citicorp was the first company to file one—in March for debt securities—but is still waiting for interest rates to drop before issuing the bonds. When the time comes, Howard will punch competing bids into the larger terminal by his desk, and a computer will figure out the best one.

TREATIES

The Reaganites' Misadventure at Sea

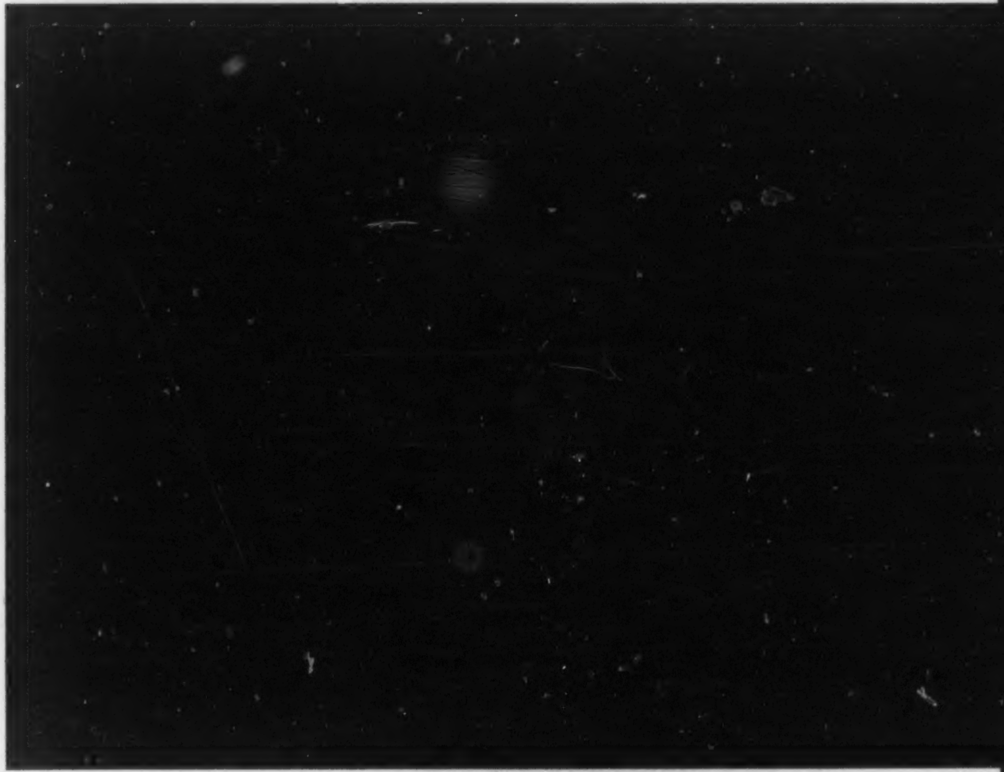
by TOM ALEXANDER

Several American companies have been captivated for years now by the lure of manganese nodules—those black, potato-shaped, metal-rich objects that litter some mid-ocean floors. These companies have spent around $350 million prospecting the seas and developing the impressive equipment required to raise the nodules and process them into refined metals. But as a result of recent decisions by the U.S. government, it is likely that when nodule harvesting eventually starts, the companies doing it won't be American. The U.S. outfits will probably have either fled to foreign shores or sold off their technology and dropped the mining idea entirely.

What's oddest about this imminent demise of American-flag ocean mining is that it amounts to a complex form of corporate suicide. Climaxing a long and successful lobbying campaign by the industry and its supporters in government, the Reagan Administration recently announced that it won't sign the international Law of the Sea Treaty, which has been under negotiation for 14 years. That pretty much sank any prospects that U.S. companies will be able to mine nodules in international waters.

In the short run, it's true, the dissolution of U.S. ocean mining is no big deal. Given the high cost of operations and the current dismal market for metals, nodule gathering may not prove profitable for decades. But the Administration's decision threatens more immediate national interests, notably freedom of navigation for ships and aircraft and political and commercial relations with the world at large. In the longer run it may impede U.S. access to strategic metals.

Were the implications less disquieting, the affair would be notable mainly for its quality of farce. For the U.S. was a prime



Formed by processes that are still not fully understood, manganese nodules dot the floors of several oceans. The richest beds, like the one above, lie in the Pacific, in a belt extending westward from the coast of Central America. Nodules vary in composition, averaging about 33% manganese, 6% iron, 1.5% nickel, 1.3% copper, and 0.2% cobalt, with traces of other metals. It appears that the companies mining nodules in years ahead won't be American.

Terry Ashe

Lockheed has developed the most elaborate nodule-mining technology, including this remote-controlled vehicle. Propelling itself along the seafloor, it scoops up nodules and pumps them through a three-mile pipe to a surface ship. The mother ship in Lockheed's experiments was the *Glomar Explorer*, designed for the CIA's famous attempt to raise a sunken Russian submarine. The prototype vehicle pictured here is about one-tenth the size of a commercial-scale miner, which would be capable of harvesting 5,000 to 10,000 tons of nodules per day.

instigator of the Law of the Sea Treaty—now widely referred to as LOST. What's more, the treaty accomplished practically everything the U.S. had hoped it would. But by withdrawing, the U.S. may deny itself the benefits. The turnabout on the treaty also reinforces the country's international reputation for inconstancy and unreliability.

Walls in the ocean

The American interest in securing a treaty on maritime law dates back to the 1950s and the emerging problem of "creeping jurisdiction"—coastal nations extending their seaward boundaries beyond the traditional three-mile limit. Many countries began adopting 12-mile limits; several Latin American countries claimed 200 miles. In the face of these claims, U.S. defense planners—and their counterparts in the Soviet Union—wanted to pin down their rights to navigate freely. Widely adopted and strictly exercised, the extended jurisdiction could close some 116 international straits to shipping and large expanses of ocean to aircraft. As it was, some countries were demanding that foreign warships provide 24-hour notice before entering their new territorial waters and that nuclear submarines passing through straits—perhaps on their way to secret stations—travel on the surface.

Looking for ways to induce other countries to guarantee unimpeded navigation, the U.S. hit on the idea of bringing in marine natural resources—notably manganese nodules. Oceanographic research had revealed the abundance of the nodules, particularly the rich deposits in the international waters of the eastern Pacific. In the Sixties, enthusiastic scientists and would-be mining entrepreneurs portrayed those seafloors as being paved with trillions of dollars' worth of fairly high-grade sources of manganese, copper, nickel, and cobalt. Metal prices were high and climbing; grades of ores from onshore mines were declining. U.S. companies—familiar corporate names such as Kennecott and Lockheed and less familiar ones such as Sedco and Deepsea Ventures—surveyed prospective seabed claims and developed techniques for lifting nodules from their three-mile-deep resting places and refining them. To help raise capital and spread financial and political risk, the companies acquired partners abroad.

The 77 saw an opportunity

At first everyone presumed that the nodules fell under the centuries-old doctrine of freedom of the seas—that, like fish, they were free for the taking. But in 1966, President Johnson, in a burst of 1960s-style openhandedness and sentimentality, characterized the nodules as belonging to all nations. In 1970 the U.N. declared them to be the "common heritage of mankind"—L.B.J.'s very words. The U.S. voted in favor of the declaration. A clause in it said that no country could exercise rights over the international seabed ex-

continued

cept in accordance with a new treaty.

In authorizing the U.S. vote, President Nixon saw the proposed treaty as an opportunity to obtain worldwide agreements to keep straits open, assure U.S. rights of navigation and marine research within 200-mile waters, provide mechanisms for settling disputes, and resolve other troublesome issues associated with the oceans.

These expectations failed to anticipate torpedoes from two directions. At the U.N., the newly militant Third World voting bloc known as the Group of 77 saw law-of-the-sea negotiations as an opportunity to advance its New International Economic Order, aimed at obtaining a more equal distribution of the world's wealth. The Group of 77 drove a hard bargain on seabed mining. Among other things, it insisted that all mining be carried out under contract to an International Seabed Authority, which would divert part of the profits to the Third World. Some members of the Group of 77, joined by some developed mining countries like Canada, Australia, and New Zealand, also demanded limits on seabed production to protect their metal prices.

The other main source of trouble was the embryonic U.S. ocean-mining industry itself. It did not care for Nixon's scheme, and its friends in Congress strongly opposed the Group of 77's demands.

Verging on the bizarre

Deadlocked over seabed mining, the treaty negotiations dragged out until 1976, when Secretary of State Henry Kissinger put forward a package of compromises, which were adopted. He proposed a dual system that would allow mining both by private operators and by an internationally owned entity, which came to be referred to as the Enterprise. Kissinger suggested that the Enterprise might get help from its private competitors—not only capital but also access to proprietary mining and processing technology. One provision carried international generosity to an almost bizarre extreme: before a private company could obtain a permit to mine a new seabed site, it would first have to prospect *two*

continued

CONSORTIUM	PARTICIPANTS	COUNTRY	SHARE
KENNECOTT CONSORTIUM	Sohio	U.S.	40%
	Rio Tinto-Zinc	U.K.	12%
	Consolidated Gold Fields	U.K.	12%
	British Petroleum	U.K.	12%
	Noranda	Canada	12%
	Mitsubishi Mitsubishi Metal Mitsubishi Heavy Industries	Japan	12%
OCEAN MINING ASSOCIATES	U.S. Steel	U.S.	25%
	Union Miniere	Belgium	25%
	Sun	U.S.	25%
	Ente Nazionale Idrocarburi (ENI)	Italy	25%
OCEAN MANAGEMENT INC.	Inco	Canada	25%
	Metallgesellschaft Preussag Salzgitter	West Germany	25%
	Sedco	U.S.	25%
	Domco	Japan	25%
OCEAN MINERALS CO.	Standard Oil (Indiana)	U.S.	30.7%
	Lockheed	U.S.	30.7%
	Royal Dutch Petroleum	Netherlands	30.7%
	Royal Bos Kalis Westminster	Netherlands	7.9%
AFERNOD	Societe Metallurgique Le Nickel	France	N.A.
	Chantiers de France-Dunkerque	France	N.A.
	Two French government agencies		
DEEP OCEAN MINERALS ASSOCIATION	Mitsubishi Heavy Industries Kawasaki Heavy Industries Kobe Steel Nippon Steel 34 other companies	Japan	N.A.

Ocean Miners in Stormy Weather

So far, six consortia have been set up to mine seabed manganese nodules when politics and economics permit. But four of the six are already undergoing a lot of strain because of the Reagan Administration's rejection of the Law of the Sea Treaty. Under that treaty, companies from non-signatory countries won't be granted mining rights. U.S. companies will probably either move abroad or give up on seabed mining.

Kennecott, a founding member of one consortium, has been absorbed by Sohio, which in turn is controlled by British Petroleum. So Kennecott's ocean-mining arm could probably find a haven in Britain—assuming that Britain ratifies the treaty. Some U.S. participants are trying to induce Latin American governments to provide a home, offering to locate nodule-refining plants in the domicile countries.

Conflicting attitudes toward the treaty have created tensions among consortium members. Lockheed, for example, has stirred up uneasiness in its Dutch partners with its tough anti-treaty stance. Like BP, Royal Dutch has oil-drilling, shipping, and marketing interests that might be endangered by ill will in the Third World.

Sedco, a specialist in offshore oil drilling, has developed mining technology for its consortium partners, but is now disenchanted with nodules, having ideological objections to the treaty and better things to do with its money. But Sedco's partner Inco, which produces 30% of the non-Communist world's nickel, is still interested in seabed mining even though some of its onshore mines are shut down. It has nightmarish visions of big oil companies cutting into its share of the nickel market.

sites, and then the Enterprise would be allowed to pick the one it wanted.

By 1980 it finally looked as though a treaty was within reach, a treaty that would effect many changes in international law. It would grant coastal nations 12-mile territorial seas plus the rights to natural resources in a 200-mile "economic zone." But it would also guarantee freedom of passage for ships and aircraft of signatory nations. It would establish standards covering marine pollution and set up an international tribunal to resolve disputes. A final conference to iron out a few remaining differences was scheduled for the spring of 1981.

Washed-away memory

Then Reagan was elected. The new Administration paid little attention to the formidably complex sea-law issues until shortly before the final session was to begin, two months after Reagan took office. By that time, government had little institutional memory about such issues as navigation, which had prompted the U.S. to initiate the LOST process to begin with. Instead the Defense Department suddenly became preoccupied with strategic metals, notably manganese and cobalt, which the U.S. imports largely from Communist or unstable Third World countries. And the Administration became preoccupied with questions of precedent and free-enterprise ideology.

A few days before the conference the Administration abruptly fired the old Carter delegation's leaders and demanded a year's delay in the negotiations while it studied the whole treaty with a fresh team. The year-long study turned into a bitter and confused affair. Badly divided, the various government agencies argued their narrow concerns with little regard for the overall package of U.S. maritime interests. Many of the bureaucrats most knowledgeable about the history of LOST were either transferred or intimidated into silence. Some of them contend that middle-level political appointees deliberately kept their Cabinet and White House superiors in the dark about the complex web of U.S. interests and options.

The intellectual vacuum was filled by lobbyists from the mining companies and by people like Secretary of the Interior James Watt and Theodore Kronmiller, a deputy assistant secretary at State, who were outraged by the thought that private U.S. enterprises would put up the capital and take the risks for the benefit of a centrally planned international regime. Some of the Third World's other demands seemed designed to inflame this reaction—the insistence, for example, that part of the seabed-mining proceeds should go to movements like the Palestine Liberation Organization.

Some of those involved in the U.S. deliberations say that Kronmiller and others really sought to sabotage the LOST negotiations by imposing demands they were fairly sure the other side would never accept. For instance, they demanded that all ceilings on seabed production be eliminated, even though the ceilings actually negotiated appear to be so liberal as to have no practical effect.

More moderate members of the U.S. delegation, including the chief negotiator, Washington lawyer Leigh Ratiner, agreed that some of the treaty's features were unacceptable. These included the absence of guarantees that the international seabed authority would actually authorize a private company to mine once it had spent, say, $200 million on exploration and

continued

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equipment. The moderates also objected to a provision for a future review conference, in which arduously negotiated compromises might be changed by a vote of the member nations. And they didn't like the requirement that mining companies sell their technology to the Enterprise.

Ratiner probably knows more about the law of the sea and Third World attitudes toward it than anybody else in the U.S., having spent some 16 years as a government sea-law functionary, chief negotiator in several sessions, and lobbyist for Kennecott and various other outfits interested in ocean industries. From that seasoned perspective, he believes that all the substantive objections could have been removed in the recent negotiations. Agreeing with that estimate is Elliot Richardson, who headed the U.S. law-of-the-sea delegation in the Carter Administration. Ratiner contends that the U.S. negotiating position was undermined by the hardliners' rigid and unrealistic demands, which convinced the Group of 77 that the U.S. wasn't negotiating in good faith.

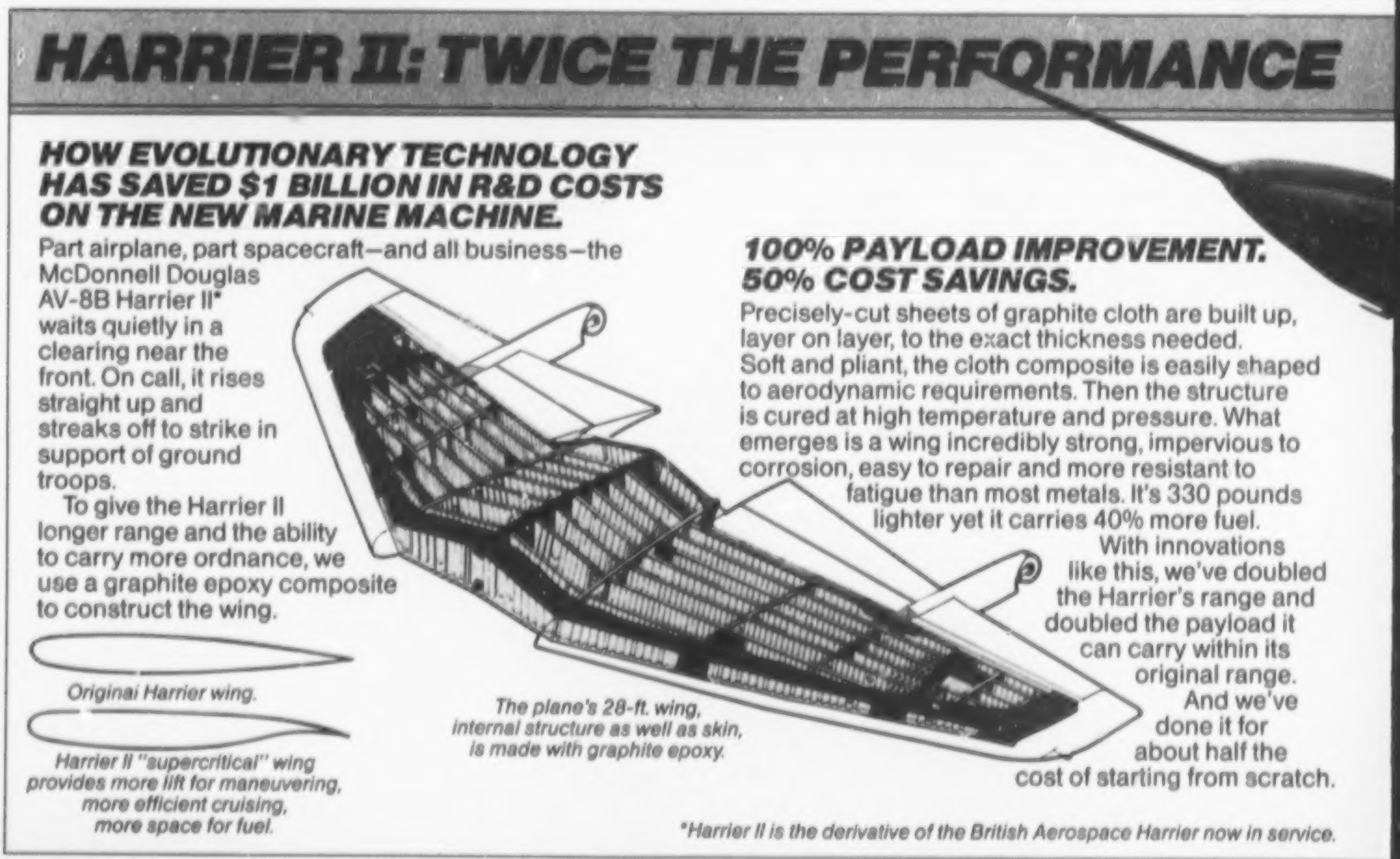
This conviction was bolstered by a strategy the U.S. delegation has been energetically pursuing: an attempt to persuade other Western countries and Japan to join the U.S. in a "reciprocating states agreement" or "mini-treaty" independent of LOST. Each country would pledge to recognize the mining rights and claims of all the others. The U.S. hoped that by the sheer weight of economic power represented in the mini-treaty it could prevent the maxi-treaty from supplanting the freedom-of-the-seas principle in international law.

Unfortunately the scheme probably won't succeed. Given the choice between joining a legally dubious mini-treaty to mine an economically marginal resource and joining a maxi-treaty with multiple benefits, the other industrial countries seem to prefer the latter. For one thing, most of them are more sensitive than the U.S. to trade relations and goodwill in the Third World. In April, to be sure, several of these countries abstained on a vote to adopt a treaty draft, but odds are that most will eventually ratify the treaty.

The Group of 77 cleverly helped spike the mini-treaty scheme this spring by sweetening the mining provisions. In effect, they agreed to create for the first generation of mining consortia a worldwide cartel guaranteeing them exclusive access to the seabed for 30 to 50 years, while protecting prices by controlling production. This "prior investment protection" clause for miners has driven a wedge between the U.S. and its allies. Moreover, it will probably either break up the mining consortia or cause their American participants to move abroad. The American companies have acquired connections with sophisticated foreign outfits, including oil companies, which not only tend to be tolerant of such arrangements but also have larger interests to protect. (See box, page 134.)

A sort of smorgasbord

Despite the Administration's recent denouncement of LOST, based on its mining provisions, the U.S. is still trying to keep a hand in the proceedings that deal with navigation and the scores of other provisions that it would like to see become international law. The delegates are scheduled to meet in Caracas in December to sign the "final act," one step short of the actual treaty. Some officials say the U.S. plans to sign this non-binding document, which will permit it to participate as an observer in some of the technical sessions dealing with various issues. But the U.S.



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says it will not participate in the seabed-mining sessions, nor sign the treaty when it is ready in January. In effect, the Administration seems to regard the treaty not as a give-and-take bargain but as a smorgasbord from which it can pick items it likes.

Some American mining companies and their supporters in government claim, for example, that seabed mining is still covered by the doctrine of freedom of the seas. But the U.S. itself acknowledged doubts about that doctrine years ago when it induced the rest of the world to sit down and clarify the matter. LOST is the outcome of that process, and it will soon become part of international law. It will, among other things, deny a go-it-alone miner's right to stake out a seabed-mining claim. And without a widely recognized claim, no company can prudently invest the kind of money it will take to harvest manganese nodules. Surveys by the General Accounting Office and the Department of Commerce support the unsurprising conclusion that banks will not lend the $1.2 billion or more required to equip a mining venture when the claim is disputed. So for all their free-enterprise rhetoric, some of the companies have been counting on the U.S. government to subsidize them or insure them against the risk of mining outside the treaty. Few Washington observers give those hopes much chance.

At any rate, government's preoccupation with the mining issues in LOST seems misplaced. Based on current metal prices and anticipated mining costs, an MIT model projects a rate of return to mining companies of only 9.5%—too low to trigger investment. Someday, no doubt, as onshore mines are depleted, seabed mining will make economic sense. Depending on whose projections you believe, that could be anywhere from ten to about 25 years from now. Whenever the time comes, mining outside the treaty will be riskier than mining within it.

Whales, for example

Right now, nobody in authority in Washington seems to have any clear ideas about what the U.S. should do that doesn't sacrifice the very benefits the U.S. originally sought to preserve. The Administration has been preoccupied with the precedents the treaty would establish, such as the "common heritage" and seabed-authority concepts, which they hold to be antithetical to American concepts of private property and of rewarding those who make efforts and take risks. But it's hard to find much practical substance in these concerns. As for precedents, U.S. governments and corporations have long dealt with all kinds of alien, sometimes absurd, regimes and institutions. And there's nothing novel about international regulation of common resources. Radio frequencies are one example. Whales are another.

Something else that bothered the Administration about the treaty was the application of the one-nation, one-vote principle to control of seabed resources. Opponents of the treaty feared that the huge voting majorities of the Communist and Third World countries might swamp Western interests. Initially, changes could be made only by unanimous consent. But 20 years after mining starts, changes could be imposed by three-quarters of the countries voting. Like the other Administration fears, this one appears to be exaggerated. At the very worst, the U.S. could always withdraw from the treaty.

Some oil company representatives and others in the mining consortia privately acknowledge that the treaty really isn't all

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that bad compared with many business deals in the Third World. "A good thing about the treaty," one man observes, "is that if the seabed authority tries to screw you, it's not just an expropriation, it's a treaty violation."

The fees and taxes to be paid to the authority are comparable to those some countries impose on mining enterprises ashore. And given the nation's interest in access to strategic materials, there is a fair likelihood that the federal government would credit the imposts against U.S. taxes, as is usually the case with foreign taxes now. Moreover, an analysis by the Bureau of Mines discounts the seriousness of the technology-transfer provisions. A company has to transfer only technology that the Enterprise can't find anywhere else, and the bureau says there are at least four manufacturers for every component of seabed-mining hardware. In any case, the Enterprise would have to pay a fair price, arrived at by commercial arbitration. Finally, the treaty's prior-investment-protection clause, with its cartel-like protections against new entrants and overproduction, would make life more relaxed for the companies that qualify—though that, to be sure, would not necessarily serve the public interest.

As matters are shaping up, the question of whether seabed mining—when it eventually comes about—will be a good deal under LOST scarcely matters since no American company is likely to mine outside the treaty anyway. What matters more is the cost to the U.S. of going its own way. It could be argued that the U.S. would be better off if there were no LOST at all. But that option doesn't exist. Whether the U.S. ratifies or not, the treaty will come into force one year after at least 60 countries ratify, possibly as soon as 1984.

Here come the gunboats

The LOST process has already begun to affect the behavior of coastal nations. Unlike national law, international law has traditionally been determined primarily by custom. LOST amounts to an explicit program to fix law by international agreement instead, but custom—that is, what countries are allowed to get away with—will continue to exert a shaping force on the treaty's actual effects. Since the treaty amounts to a delicate bargain between countries with widely diverse interests, adherents will have an incentive to prevent other countries from getting away with much.

An analogous instance was the U.S. challenge last year to Libya's unilateral claims in the Gulf of Sidra, a challenge that took the form of downing two Libyan fighter planes. It's conceivable that some countries will be prepared to challenge any unilateral moves by non-signatories to mine oceans or even to traverse straits. Some states, Indonesia, Malaysia, Algeria, and Morocco among them, are already arming themselves with Exocet missiles, torpedoes, and gunboats to enforce the sovereignty authorized by LOST. Retaliatory expropriation or sabotage of American commercial interests abroad cannot be ruled out.

But even these consequences of the Reagan policy are less disquieting than the habits of mind it represents. It's the kind of policy that incurs considerable costs but no commensurate gains, that is better suited to raising ideological fervor in think tanks than to furthering national interests—the kind of policy that was a trademark of the Carter Administration in its worst days.

Can we relocate 120 families, almost 1.7 million pounds of personal, household and corporate belongings, two company departments, and more than 18,000 delicate computer tapes from Enid, Oklahoma, to Fort Worth, Texas, over a few weekends without seriously disrupting our business?

That was the question Champlin Petroleum asked Employee Transfer Corporation just a year ago. ETC's answer? Yes!

Planning started almost seven months before the scheduled relocation, and during that time, ETC: Organized and conducted a broker-appraiser workshop to help assure Champlin employees of getting the maximum value for their homes. Counseled Champlin employees, and their families, about all the details of relocating, from finding new homes and new schools to helping spouses find new jobs. Researched the Fort Worth housing market to prepare a custom-designed, in-depth presentation to Champlin transferees about communities and homes available to them. Surveyed the moving industry to select the best qualified firm—on the basis of personnel, experience and equipment essential to moving computer hardware and software—and then coordinated the schedules of 48 other vans to move family belongings and corporate furniture. Developed a detailed timetable for every facet of the relocation, down to the sequence for packing, loading and unloading all Champlin's computer tapes.

The Dimensions of Quality:

Conclusive Performance.

Champlin's data processing department closed Friday morning, July 17, when the moving firm selected by ETC began packing, as scheduled. Monday morning, July 20, it was business as usual for the department—on its first day in Champlin's corporate headquarters in Fort Worth.

And what does Tom Buie, responsible for day to day contact with ETC and Manager of Employee Relations at Champlin, think of ETC's performance? "They had to coordinate everything possible," he says, "from offering encouragement to our transferees to getting them to Fort Worth to moving all our computer tapes. We didn't miss a deadline."

Thanks, Mr. Buie. Conclusive performance is one way we define the dimensions of quality at Employee Transfer Corporation.

We can help your company relocate a transferring family, a department, or a company. Call us today, or write Employee Transfer Corporation, Corporate Communications Department, 20 North Wacker Drive, Chicago, Illinois 60606. Telephone: (312) 630-0200.

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Opportunity Knocks

TRYING TIMES ABROAD *The office tower at right, construction halted for lack of funds, stands as mute comment on the battered world economy. The special section that begins on this page describes the efforts of business to turn trying times to advantage. The global slump, etched in charts beginning on page 156, has clobbered earnings of the world's 50 biggest industrial corporations (page 181) and the 500 largest industrials abroad (page 182); gains for the top 100 foreign banks have been slim (page 196). Yet Merrill Lynch senses profits abroad (page 164): it has forged a link with a Hong Kong financier who may become its biggest shareholder. And the woes of International Harvester are attracting a German entrepreneur (page 174) who, by acquiring losers, is building a construction equipment colossus.*

by ALEXANDER STUART

The euphoria that swelled with Mexico's emergence in the late 1970s as the world's fourth-largest oil producer has dissipated with the force of a ruptured balloon. But to José Angel Gurria, 32, Mexico's director of foreign financing, the pessimism clinging like black crepe to the country is as misplaced as the giddy optimism of two years ago. "We were never as good as we looked," he says. "And we're not as deep in trouble as it would seem today." Many American investors seem to agree. As Claudio X. González, managing director of Kimberly-Clark de Mexico, 43% owned by the U.S. paper products company, puts it: "This is one of the most reboundable economies in the world."

Mexico has bounced back lustily from past slumps, racking up average real growth over the last 30 years of about 6% a year compounded, while the U.S. economy was growing 3.2% annually. Mexico was the U.S.'s third-largest trading partner last year, behind Canada and Japan.

Research associate: David Weld Stevens

American business has big bucks riding on Mexico—about $7 billion in direct investments. Moreover, the Mexican government and private industry, having tried to push ambitious industrial development programs too fast, are in hock up to their sombreros to American banks, which hold around 70% of the country's external debt. By the end of this year, FORTUNE estimates, public debt owed to foreign lenders will reach about $65 billion (see chart, page 148). Finance Minister Jesús Silva-Herzog, 47, expects total external debt to reach $80 billion by December. That would make Mexico the non-Communist world's most indebted nation.

U.S. executives may be forgiven a little timorous knee-knocking under boardroom tables. For the fate of those Yankee dollars south of the border depends on what happens to the Mexican economy, which has come to a sputtering halt. After an 8% surge in each of the last three years, Mexico's real gross domestic product—gross national product less earnings from foreign investments—will probably show no increase from now through the first

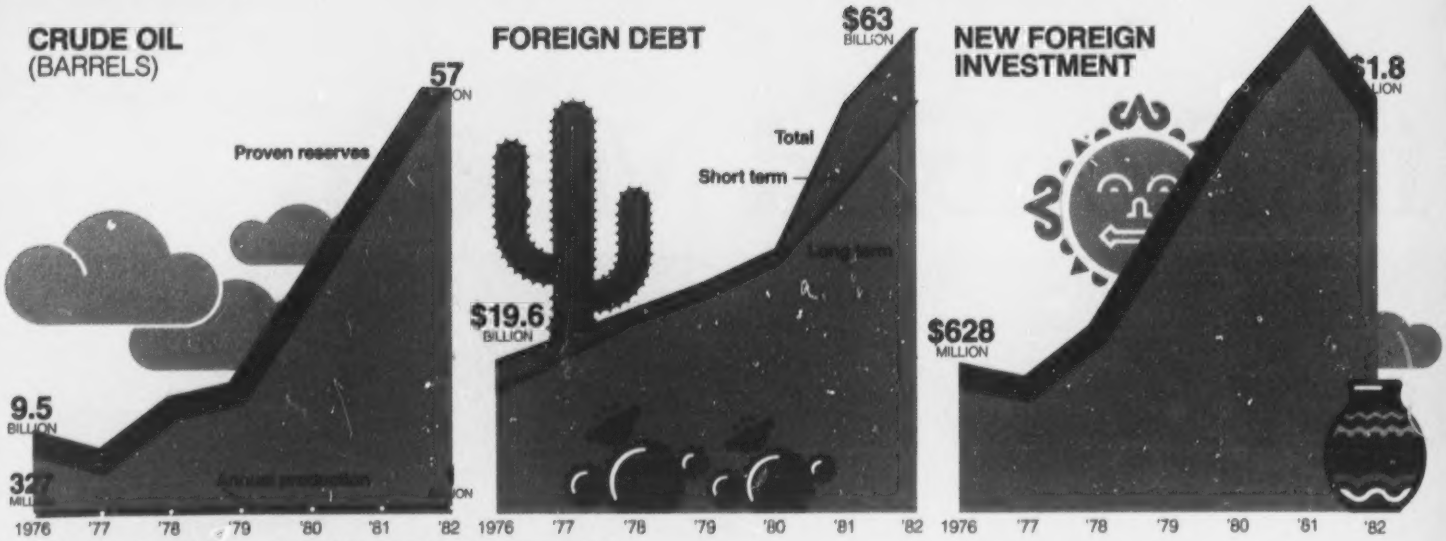
continued

U.S. companies keep investing in new ventures, counting on tough austerity measures to bring an economic revival.

in Troubled Mexico

Photographs by Alon Reininger–Contact

Mexico's oil company stopped building its headquarters at government behest. A parking garage (foreground) still rises.



Sources: Diemex-Wharton Econometrics, American Petroleum Institute, International Monetary Fund.

Mexico's Economic Landscape

The steep upward slope of proven oil reserves (above left) shows how fast Mexico's geologic blessings multiplied after 1976. Oil production merely tripled, because oil revenues were poured into non-oil projects rather than into pipelines and storage facilities. To finance ambitious spending programs, public debt to foreigners grew dramatically. A shortfall in 1981 oil revenues caused the bulge in short-term borrowings. New foreign investment spurted but is expected to tail off this year from 1981's peak of $2.25 billion. The 1982 figures for debt and investment are FORTUNE estimates.

quarter of 1983. Says one Yankee businessman who has worked in Mexico City for almost 15 years: "I've never seen people quite so far down."

The litany of woe is prodigious. Inflation has climbed to an unprecedented 60% annual rate. Devalued 30% last February, the peso has continued to fall against the dollar; from a predevaluation 26 pesos to $1, the exchange rate has gone to 49 pesos to $1. The government's deficit as a percent of GDP has more than doubled since 1980 to around 15% (the U.S. deficit this fiscal year will be about 2% of GNP). The Mexican stock market has lost three-quarters of its value since the 1981 peak, a collapse that approaches the famous bust in Dutch tulip prices 345 years ago.

Though it has a 72-billion-barrel cache of hydrocarbons—a 12-fold increase in proven reserves of oil and natural gas since 1977—Mexico can't simply pump its way out of trouble by turning valves. Petróleos Mexicanos (Pemex), the national oil company, has tripled production in five years, to roughly three million barrels per day; domestic consumption is running around 1.25 million barrels, and daily exports in June reached 1.7 million barrels. To further increase the output of crude would require spending billions on production platforms, oil-storage facilities, and the like—money the nation doesn't have right now. And even if Pemex had an extra million barrels or so a day to pump, it probably would not be able to peddle the stuff in the present soft international oil market without a drastic reduction in price. Mexico could end up selling a lot more oil for about the same amount of money.

The wallowing of the economy this year is accentuated by the rhythms of Mexico's sexennial presidential succession. Drift and a general decline in economic activity traditionally attend the waning days of a presidency, with a resurgence soon after the new team arrives on the scene. In December, President-elect Miguel de la Madrid Hurtado will succeed José López Portillo. Although De la Madrid, 47, is highly thought of by Mexican businessmen, his precise prescriptions for the economy have been shrouded in campaign rhetoric.

The price of caution

Yet dozens of interviews by FORTUNE with Mexican and American businessmen, bankers, and others suggest they take it on faith that De la Madrid, once in office, will continue the spartan economic policies finally imposed by the López Portillo government in April. While U.S. investors will almost certainly trim new outlays in Mexico this year by as much as 20% in response to current conditions, old hands in the territory—especially those who have successfully endured past cycles—see signs that the austerity program is beginning to produce results. For example, severe import restrictions helped produce a positive balance of trade for the first five months of 1982, after a $2-billion deficit in the same period last year. The old hands appear to have lifted their sights beyond the current trough. Over the next year or two, businessmen look for a cooling of inflation, an easing of credit, and renewed, if more modest, growth.

Some Yankee investors recall that they paid a price for excess caution six years ago. In the 1976 presidential interregnum, an economic slump brought the first peso devaluation in 22 years (there have been two since). "We froze," says the managing director of a U.S. consumer product company's Mexican subsidiary—meaning that he held back on expanding his plant and lost sales when the economy revived.

The long view is being encouraged by McKinsey & Co., the U.S. management consulting firm. Says John Lutz, director in charge of McKinsey's Mexico City office: "We're telling our clients that now is a great time to lay the foundation for 1983 and beyond." José Carral, Bank of America senior vice president and its top man in Mexico, predicts that 1983 could be "one of the highest years ever for new investment." Carral has good reason to hope for

continued

Surplus natural gas lights the sky over the Bay of Campeche in the Gulf of Mexico. The U.S. buys a relatively small amount of Mexican gas—about 300 million cubic feet a day—but negotiations to double its take haven't got off the ground.

a prompt turnaround—his bank has almost $3 billion of Mexican loans, the largest portfolio of any foreign bank.

In March, Hewlett-Packard Co., the California computer outfit, announced its intention to build a plant near Guadalajara to manufacture minicomputers. The company aspires to build a business in Mexico exceeding $100 million a year in five years. "Half our business is outside the U.S.," says Richard Love, Hewlett-Packard's director of international manufacturing. "If we stopped overseas activity whenever and wherever there was a slowdown, we'd get nothing accomplished."

Tourism in Mexico has virtually collapsed; the country's net revenues from the leisure game fell 66% in 1981 to about $2.3 billion. But Marriott Corp., the American hotel and restaurant company, seems confident that travelers will one day return. Marriott has agreed to buy Las Hadas, a resort on the Pacific, and plans to build a large hotel in Monterrey.

General Electric might be expected to have lost its enthusiasm for Mexican ventures after the second phase of a $20-billion nuclear power complex, for which GE hoped to be a contractor, fell victim to the government's austerity measures. But Robert F. McCracken, GE's vice president for planning and development in Mexico, says: "Discouraged? All I know is that we've been exploring two big joint ventures with Mexican partners in the last couple of months." McCracken won't discuss details, since GE's board has not yet approved the deals. "We haven't shelved any of our long-term visions for the country," says David C. Brezic, who works for McCracken in strategic planning.

"We need partners"

Other foreign investors are eager to get into Mexico but can't find a local partner with pesos in his pockets. Mexico's restrictive foreign investment laws require that outsiders surrender at least 51% of the action in most projects to Mexicans. Trouble is, the nation's credit markets are as dry as dust these days, and the locals are conserving every peso to keep their own operations going. Bank of America's Carral says he has a European client who wants to put $500 million into petrochemicals "immediately"—but can't find a Mexican company able to ante up its share of the initial capital.

Some deals have been deferred or canceled. Cydsa, a Monterrey-based producer of chemicals, fibers, and heavy equipment, decided almost a year ago to cut back on debt It has postponed construction of a plant that was to manufacture medium-size earthmovers, the costliest phase of a $250-million joint venture with Caterpillar.

Mexicans recoil at the prospect of laboring under the gringo's boot. But when it suits a national purpose, the government will bend those nettlesome investment laws. The Foreign Investment Commission has allowed Hewlett-Packard to own 100% of its new computer plant because the government wants to stimulate domestic manufacture of computers. Now

General Motors' $100-million Chevrolet assembly plant near Saltillo in northern Mexico came on stream last year, but the line runs only one shift a day. The cars are for the Mexican market and for export to other Latin American countries.

that the country urgently requires fresh venture capital instead of new debt, more bending may be in the offing. "We need partners, not creditors," is the oft-repeated phrase of Manuel Espinosa Yglesias, 73, chairman of Centro Bancomer, Mexico's biggest bank.

Many foreign investors remain eager for partnership because they are mindful of the tangible assets that Mexico enjoys: oil, silver, copper, sulfur, zinc, and many other natural resources. They see a continuing demand among the country's 70 million people—current depressed conditions notwithstanding—for consumer products, electronic equipment, trucks, autos, and all the other benchmarks of progress in a developing nation. And they are eyeing that 1,800-mile border with Mexico's rich neighbor up north as an export target. Almost $31 billion of trade shuttled back and forth across the Rio Grande in 1981, with the U.S. accounting for 60% of Mexico's foreign sales.

For investors to cash in on Mexico's promise, the nation must first deal with troubles that trace to two causes—oil and money. The economy ignited when oil revenues spurted from $420 million in 1976 to over $13 billion last year. The country simply could not absorb all those additional dollars chasing after goods and services without virulent inflation. "The genie got out of the bottle," says Joseph Grunwald, a senior fellow specializing in Latin America at Washington's Brookings Institution.

Mexico's development ambitions soared with its oil revenues. Those ambitions found expression in a 1979 program the government saw as a "global plan for development." The scheme in part was a bold reach to deal with the staggering contradiction of the economy: that a country capable of such dazzling performance in the aggregate could yet contain elements so poor, so hungry, and so little used. Roughly 40% of the population earns only 10% of the national income; at least 18 million Mexicans are malnourished, and some 45% of the work force are either unemployed or underemployed.

Accordingly, the No. 1 objective of the development plan was job creation. Rapid growth was needed to achieve that end; the growth, it was thought, would flow from pumping money into agriculture and such capital-intensive industries as energy, petrochemicals, and steel. If inflation reared up as a side effect, so be it. Growth was the passion that animated the global plan, not fiscal conservatism.

Pied pipers went south

The achievements of the plan have been impressive. Four million new jobs were created. Productive capacity in trucks, automobiles, and cement roughly doubled. In 1981, for the first time in years, Mexico became self-sufficient in corn and beans, the main staples of the Mexican diet. But the development scheme's true costs—inflation and excessive imports among them—were masked by a swift-flowing stream of petrodollars.

Foreign banks, in particular U.S. institutions, must bear at least part of the responsibility for spurring Mexico along the road to excess. "Planes couldn't get us there fast enough to lend them money," says a senior vice president of a New York bank's international department. The pied pipers from north of the border shoveled loans into the Mexican economy with almost blind enthusiasm.

"'Take more,' they told us," recalls Alfonso González Migoya, vice president and chief financial officer of Cydsa, the Monterrey conglomerate. When Cydsa executives journeyed to New York last November to tell the company's bankers why they thought the Mexican economy was fast going sour, González recalls, some of the lenders protested that they were being overly cautious.

A California bank chairman recently bemoaned the mess at Monterrey's Grupo Industrial Alfa, the diversified steel, metal, and chemical producer that in April suspended payments on $2.3 billion of debt owed to more than 100 Mexican and foreign banks. "How could this have happened?" the banker asked a senior Western diplomat. "You let it happen," the diplomat replied. Says a New York lender: "It got so we didn't even review the Mexican portfolio on a regular basis. We just saw those oil reserves increasing."

Out of myopia and machismo, Mexico also failed to recognize the reality of the oil glut that caused its revenues to tumble in 1981. When Pemex tried to prop its price for crude above the weakening market, the nation lost some $7 billion in oil revenues from canceled purchase contracts. (The contracts were later renewed at lower prices.) Still more revenues evaporated with falling prices for silver, copper, sulfur, and other commodities.

To make up the shortfall of revenues, the government embarked on a frantic round of short-term borrowing. Loans maturing in less than one year increased from 5% of Mexico's public debt in 1980 to 22% at the end of last year. As the difference between the U.S. and Mexican inflation rates widened, nervous Mexicans sent pesos abroad by the billions. At home, they converted pesos to dollars as fast as they could—"dollarized," they call it in Mexico City—and dollar deposits in Mexican banks increased 85% in 1981. So cheap was the dollar that it cost Mexicans less to vacation in Miami for two weeks than in Acapulco. Still, the February devaluation came as a shock to a people who perceive the strength of the currency as one with the national character.

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The government frittered away the benefits of the devaluation by waffling on policy. Several so-called stabilization programs were announced, then immediately discarded, revised, or otherwise softened. More pesos lit out for the border. In March López Portillo took firm action at last: he installed Miguel Mancera, 49, in the top spot at the Bank of Mexico, the central bank, and Silva-Herzog as head of the Finance Ministry. Both men are thought to be allied with the incoming president, and the appointments were cheered by businessmen. "Silva-Herzog is a force for realism," says a Yankee.

The 17-point austerity program unveiled in April represents the first coherent attempt to chart the way to recovery. It aims to limit the net increase in the public sector's foreign debt to $11 billion this year, down from $18 billion in 1981. Other worthy goals include slashing imports and the federal budget, while boosting revenues through increases in tariffs and in the prices of subsidized goods and services.

The April measures have exacerbated the credit crunch. By requiring Mexican banks to purchase additional treasury obligations, for example, the Bank of Mexico has raised the effective reserve requirement on deposits to as much as 90%, sharply reducing funds available for lending. Local banks have only a trickle of money to offer even the soundest clients, and interest rates are hovering around 55%. The excruciating squeeze is intentional, Mancera says. The hope is that it will force all those pesos on the lam abroad to return home.

The waiting agnostics

A U.S. economic resurgence, with its increased demand for imports, would help get Mexico back on the road to prosperity—though trade relations between the two countries continue to be prickly, hung up on issues ranging from illegal immigration to the importation of natural gas. But more than anything else, Mexico's recovery hinges on how rigidly the government adheres to its own austerity plan. On paper the April program dedicates Mexico to at least 18 months of ascetic living. It is, in fact, tougher than the strictures imposed on supplicants for loans by the International Monetary Fund, that global police-

continued

man of troubled economies. The IMF provides its clients more than money; its monitoring puts a kind of seal of approval on a country's credit rating that foreign lenders find reassuring.

Mexico turned to the IMF during its last fiscal crisis in 1976. This time around, the nation would like to go it alone. But that may prove difficult—skepticism about the April measures abounds. "We're all kind of agnostic at best," says one Mexican consultant. "With a government that has overspent announced budgets by as much as 30% a year, why should we believe that it will actually be able to make cuts?" Mancera concedes that the fastest way to make believers of the agnostics would be to turn to the IMF: "If we do not go to the IMF—and the intention is not to go—it will take longer to have that credibility."

Mexico's challenge for the remainder of the year is to wrest about $6 billion of net new borrowings from the capital markets. Most bankers believe that to be possible. Big money-center banks seem willing to ride out the storm with their troubled client, though some regional banks have turned antsy about new Mexican loan participations. Gone is the era, however, when Mexico could scoop up funds at three-eighths of a point over the London interbank-offered rate, the Euromarket's version of the prime. The spread, or the difference between a bank's cost of funds and the rate it charges customers, has more than tripled on recent Mexican loans, and could widen in the months ahead. That fattens the yield on Mexican securities. Consider Mexico's $100-million, 15-year Eurobond offering in July. The 18.5% interest rate was a record high, and the deal was oversubscribed within days.

No place for fictions

A general decline in world-market interest rates would be a wonderful thing for Mexico. Absent that, what could stem the splay of spreads is a perception in the lending community that Mexico means business about its austerity program. The incoming De la Madrid administration could further enhance credibility by putting an end to many of what the Mexicans call fictions—essentially subsidies—that are so prevalent. The Mexico City subway, for example, carries three million fares a day at 1 peso per ride (about 2 U.S. cents). The true cost of subway service is estimated at anywhere from 7 to 40 pesos per trip. Gasoline is also underpriced, at about 55 U.S. cents per gallon.

Subsidies to agriculture are extraordinarily generous. Producers can buy fertilizer, seed, and insecticides at 30% to 70% of cost, with 12% credit (vs. that 55% market rate). To that add crop insurance and sky-high price supports for such commodities as corn and beans, says S. Kenneth Shwedel, senior economist at the Banco Nacional de México, and "there's practically no way you can lose money on those products."

Perhaps the only sure thing about the coming months is that Mexico is in for a harsh period of readjustment, one that could strain its vaunted political stability. As the strains intensify, political considerations could persuade the new president to soften the austerity program. Still, the business community is clearly betting on Miguel de la Madrid's ability to hang tough—and to get the Mexican economy moving again. It's possible that a skittish bookie might not take bets on those two propositions just now. But a surprising number of well-informed American companies already have. ■

Kellogg's

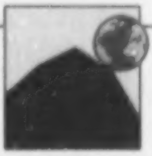
$75,000,000 debt restructuring

The undersigned acted as advisor
and guarantor to Kellogg Company
in this transaction

Morgan Guaranty Trust Company *of New York*

June 1982

A World Economy

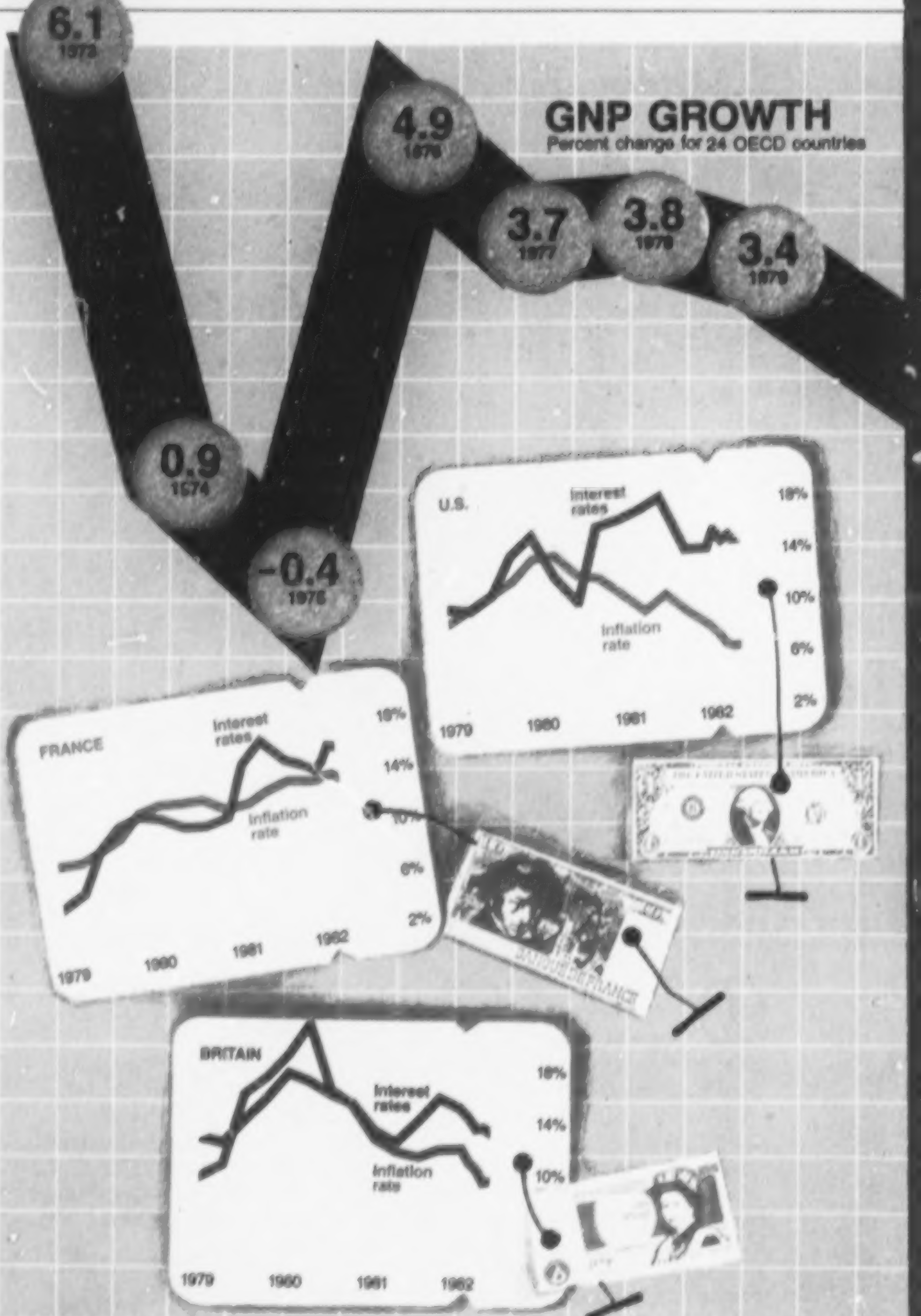


The world economy finally seems about to emerge from the doldrums. It will be a slow recovery at first, and will remain slow as long as interest rates stand so high. The outrageous inflation that spawned them is abating, but the rates hang high for several reasons, including worries about huge fiscal deficits in the U.S. and lack of confidence in the Federal Reserve's management of the money supply. Interest rates continue to crimp capital investment, retard consumer spending, and play havoc with the world's currencies. They are something the world could do nicely without.

As the charts on this and the following pages illustrate, the economic situation is not entirely dismal—at least not for the highly developed nations of the West. Those nations have been making handsome gains in productivity, although the gains have been achieved amid the worst unemployment levels since the 1930s—levels that are expected to go on rising even after economic recovery is well under way. The Western nations have also shown strong improvements in their balance of payments, thanks largely to the continued weakness in the market for OPEC oil. Of course, that turn of events doesn't seem so cheery to the OPEC member nations, whose once heavy payments surplus is plunging toward zero.

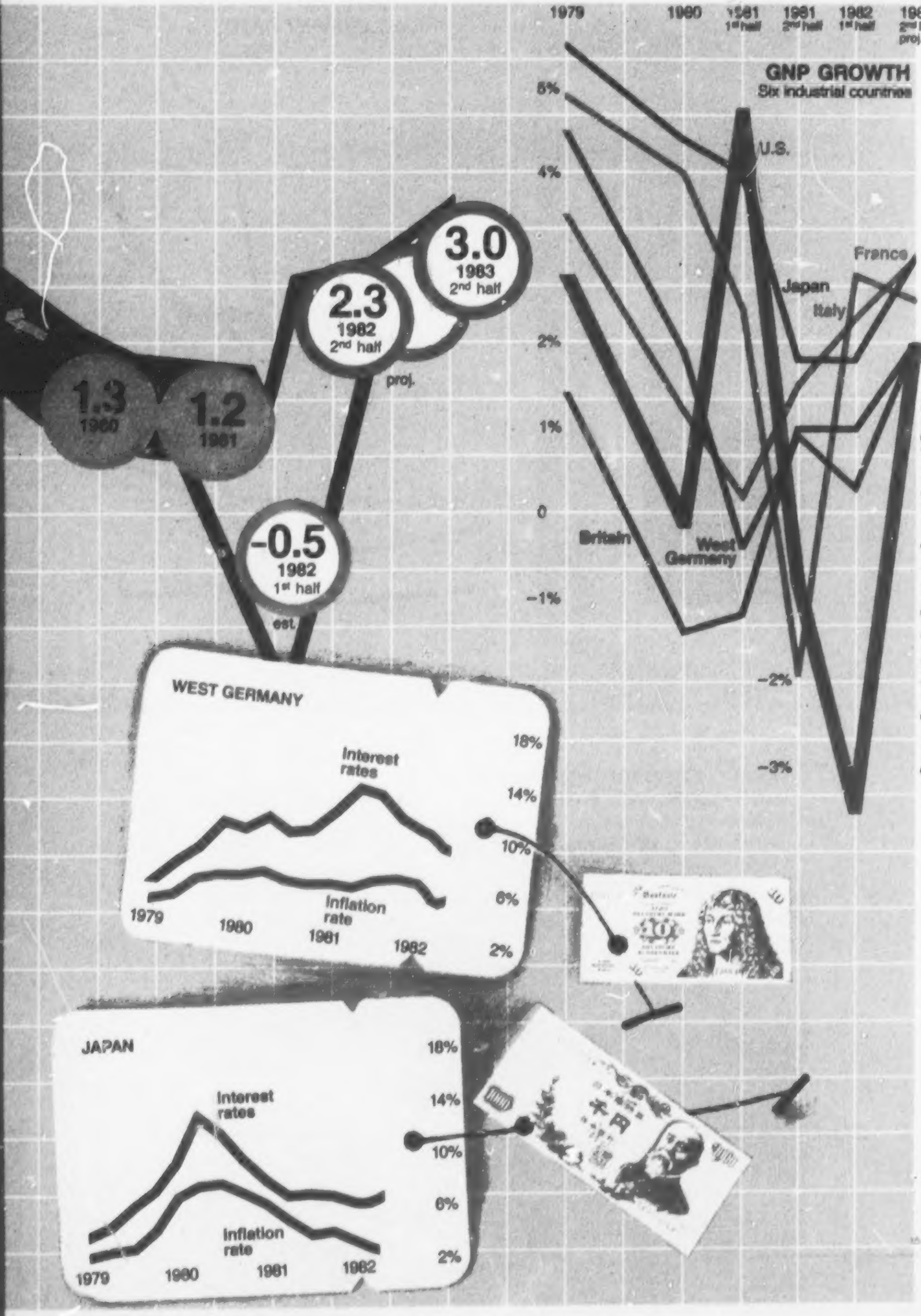
The true victims of the global slump are the newly industrialized countries. Like everyone else, they have suffered from the recession; with their heavy reliance on exports, they have suffered especially from the diminished buying power of their customers in developed nations. Their balance of payments has sorely deteriorated, and they have been forced to place procrustean controls on their economic growth. They have also been hit especially hard by high interest rates, since they are voracious borrowers. These countries, whose economic and political stability is now threatened, are proving troublesome customers for their bankers in more privileged nations.

—Arthur M. Louis



Illustrations by Jane Sterrett

Ready to Struggle Back



Source: Organization for Economic Cooperation and Development

The Deepest Plunge Since World War II

The annual GNP growth rate, adjusted for inflation, has been declining steadily in recent years among the major industrial nations. The thick sagging line at far left shows the composite performance of the 24 members of the Organization for Economic Cooperation and Development, consisting mainly of the advanced, non-Communist countries. During the first half of this year the OECD members suffered a decline in real GNP—what the economists euphemistically call negative growth—as the world slipped into its worst recession of the postwar period. Dragging heavily on the overall performance was the U.S., where GNP slumped at an annual rate of 3.5% in the first half of this year, following a 0.8% rate of decline in the second half of 1981. Many experts predict that a modest upturn in the world economy is just around the corner, spurred by an expected rebound in the U.S., and the OECD predicts that it will continue at least through 1983. The chart at near left indicates that of six major OECD nations, all but the U.S. had "positive growth" in the first half of 1982. The U.S. economy has whipsawed through a W-shaped fluctuation, while the growth lines of the other countries have been more or less V-shaped. The U.S. was hit squarely by two recessions; the other countries passed through a single slump.

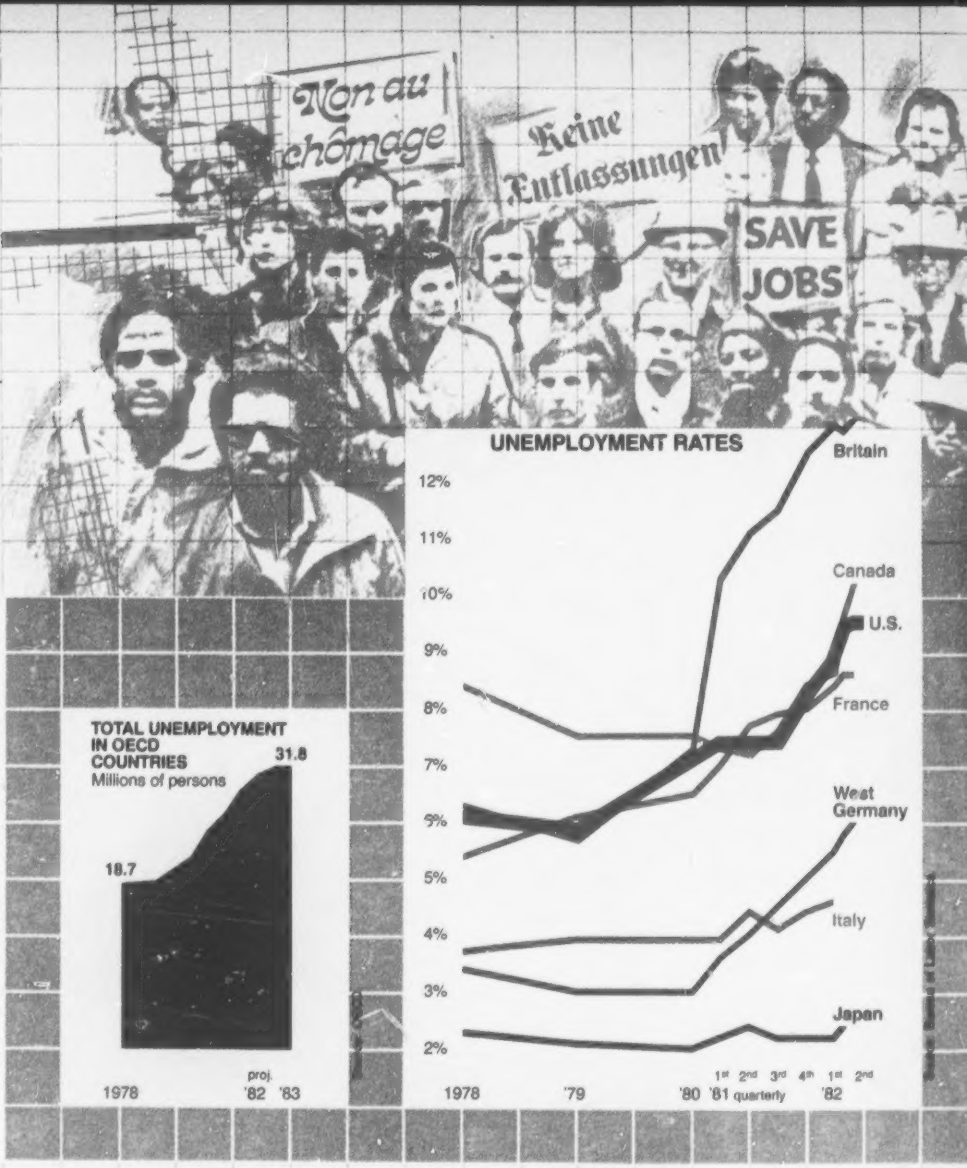
Interest Rates and Prices on Divergent Paths

A strong, enduring economic recovery cannot be achieved while interest rates remain phenomenally high. The current cost of money discourages capital investment and expenditures on durable goods, essential ingredients of a healthy economy. The root of the problem is the U.S., where at midyear short-term interest rates exceeded the inflation rate by eight percentage points, far above the long-term average of two percentage points. The high rates in the U.S. have attracted investors from all over the world, prompting other nations to keep their own rates artificially high, lest their currencies lose too much ground to the dollar. Departing somewhat from this policy are West Germany, which has eased its monetary policy, and Japan, which has not been seriously troubled lately by either inflation or tight money.

continued

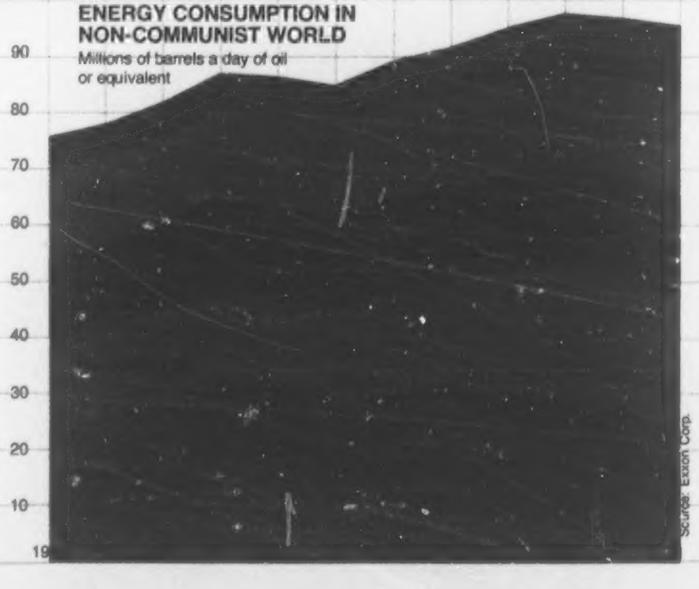
Swelling Multitudes of Job Seekers

The human cost of the world economic slump can be seen in the unemployment figures, which are heading up—and even off—the charts. The potential for political upheaval is frightening, yet thus far there have been little more than peaceable demonstrations, possibly because government transfer payments have eased the hardship. "Fifteen years ago," remarks a U.S. economist, "there would have been rioting in the streets." The smaller chart at right includes an OECD forecast that total unemployment among its member nations will move up from 29.3 million at present to 31.8 million next year. The organization's chief economist, Sylvia Ostry, explains that whatever capital the industrial nations have invested lately has gone into labor-saving equipment, and this will prevent the rise in employment that usually accompanies a recovery. But Britain, with the highest unemployment rate among the largest industrial countries, may prove an exception. Richard M. Young, an economist with Chase Econometrics, observes that British corporations cut costs much more than they would have in a milder downturn: "They are working very close to the bone at this point, and they will have to re-employ people coming out of the recession."

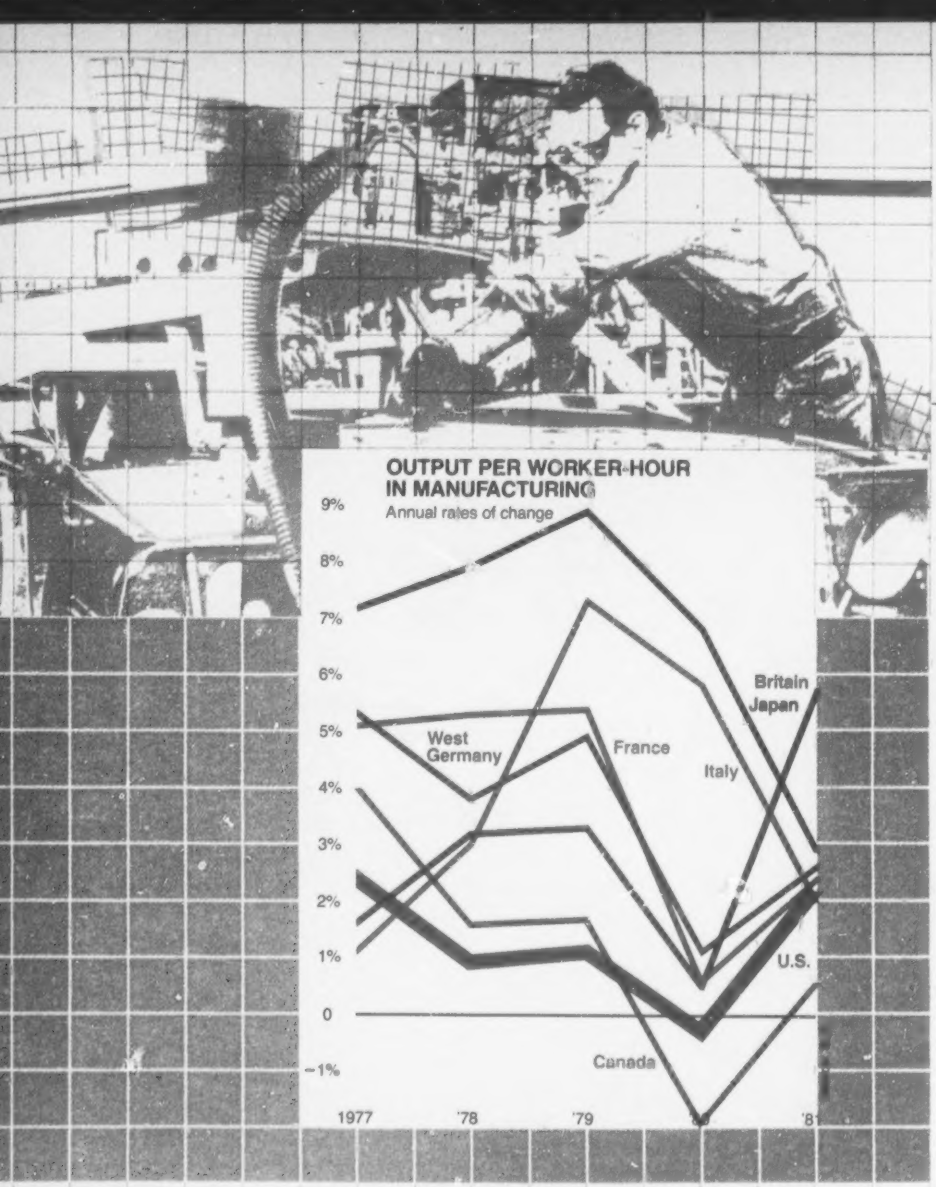


The Oil Cartel's Weakening Grip

OPEC isn't what it used to be. This became plain in 1981 when, for the first time on record, the 13-member cartel accounted for less than half the non-Communist world's oil consumption. OPEC's contribution was 23.5 million barrels a day, down 25.6% from the 1979 level. Since nearly an eighth of that oil was consumed by the member countries, exports were barely above 20 million barrels a day. These continued to fall early this year, and during March OPEC's members agreed to limit their total exports to 17.5 million barrels a day. By July they were in open dispute on how to limit production and prop up prices. Total energy consumption has been gradually declining since 1979, mainly because of the slowdown in industrial activity. Conservation has also played a part. Since 1973, consumption per unit of GNP has declined 16%.

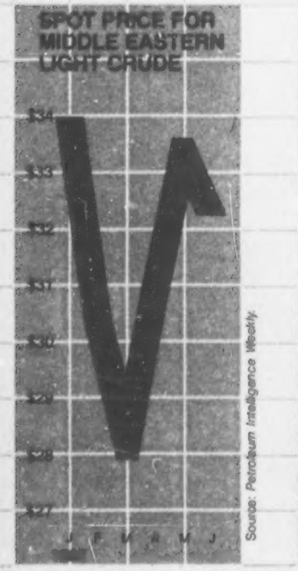


Source: Exxon Corp.

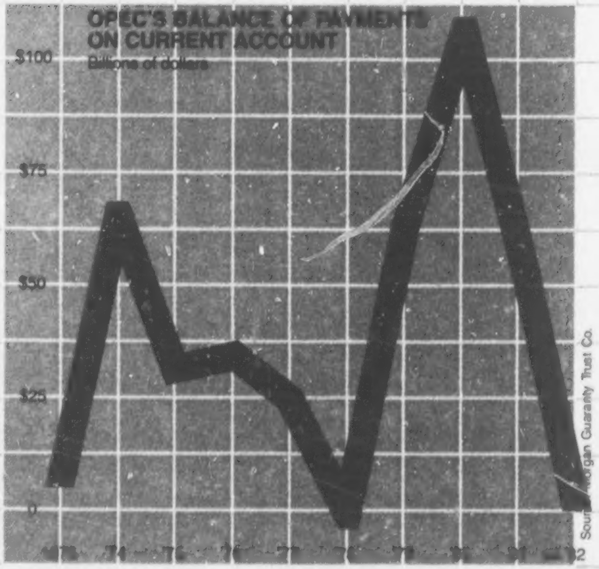


Hopeful Omens in a Productivity Rebound

The sluggish world economy has produced an unusual side effect: an uptick in productivity in most of the major industrial nations. In past recessions, employers have been slow to lay off workers as output declined, and productivity has dropped. This time, corporations have felt more pressure to curb their work forces and boost efficiency. Thus in Britain, whose economy has taken the worst tumble among the seven countries charted at left, productivity made the biggest leap during 1981. As the chart shows, Japan and Italy were exceptions to the rule. The recession hit Japan relatively late in the year, and Japanese corporations had only begun to trim employment by year's end. In Italy, where the labor force is notoriously rigid because of powerful unions and government resistance to layoffs, employers can never cut enough people from the payrolls during hard times. Productivity in the industrial countries should climb handily over the next year if, as the OECD predicts, their economies recover while companies cautiously rebuild work forces. Rising productivity, coupled with continued moderation in wage increases, could cause unit labor costs to taper off, and with them, perhaps, the underlying inflation rate.



Source: Petroleum Intelligence Weekly



Sour organ Guaranty Trust Co.

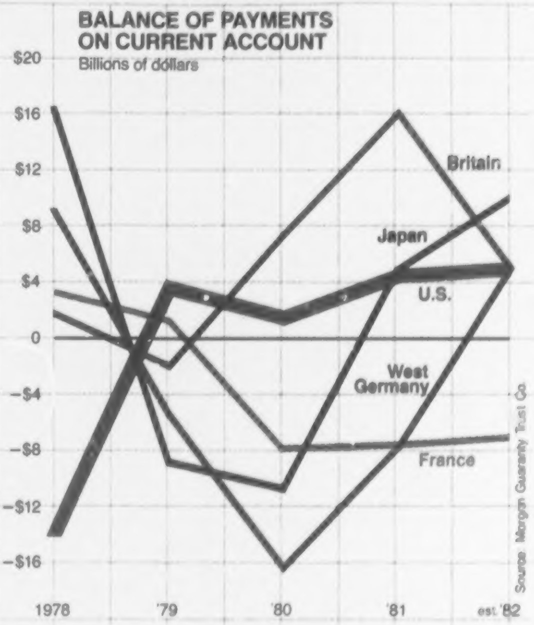
A Vanishing Tower of Petrodollars

The demand for Middle Eastern oil may be down, but the price remains annoyingly high. Spot prices, which apply to about 5% of the oil sold, did plunge as low as $28 a barrel in March, when it seemed that OPEC could no longer maintain its posted price of $34 on long-term contracts. But the spot price rebounded when OPEC announced plans to curtail production, and was still hovering close to $32 in late July, despite the dissension among OPEC members. The weak demand has ravaged the composite balance of payments for the OPEC countries, which soared in 1974, dipped, and zoomed to a stratospheric $106-billion surplus in 1980. Economists predict the figure will plunge to around zero this year. Some OPEC countries have cut back sharply on imports and are spending and investing less lavishly in foreign lands.

continued

OPEC's Loss Is the Big Five's Gain

Thanks in part to a slackening dependence on OPEC oil, as well as a steep decline in the price of imported raw materials, the balance of payments has improved in the highly developed nations. As the chart indicates, all of the Big Five made gains during 1981, and all but Britain should gain again this year. With the economy perking up, Britain has stepped up its imports of food and manufactured goods, particularly from the European continent. Inventories are expanding, and British inventories tend to be import heavy. Energy-poor France's balance went awry when oil prices zoomed in 1980; France is now the only member of the Big Five with a payments deficit. The fiscal policies of the Mitterrand government have stimulated consumer demand both for imported goods and for domestic goods that might otherwise be diverted to export. The most impressive performers on the chart are West Germany, which is moving back to the plus side, and Japan, which returned there in 1981.

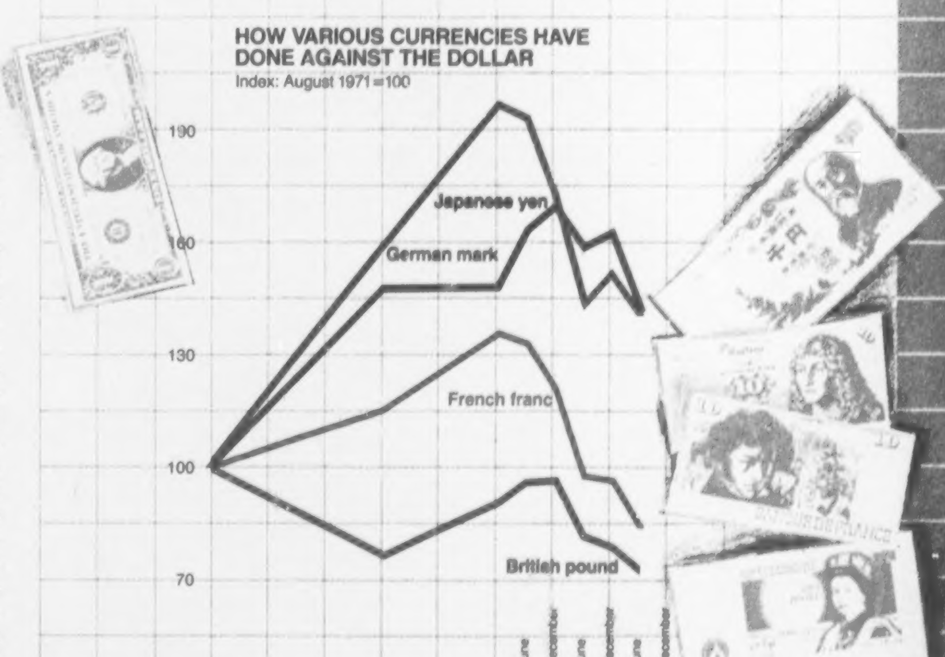


BALANCE OF PAYMENTS ON CURRENT ACCOUNT
Billions of dollars

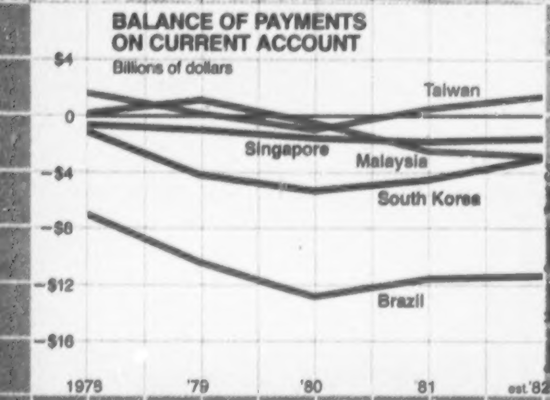
Source: Morgan Guaranty Trust Co.

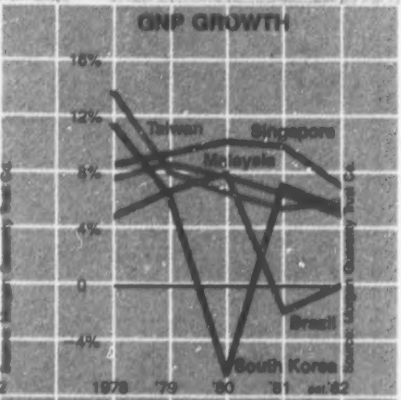
A Strong Dollar Batters Other Currencies

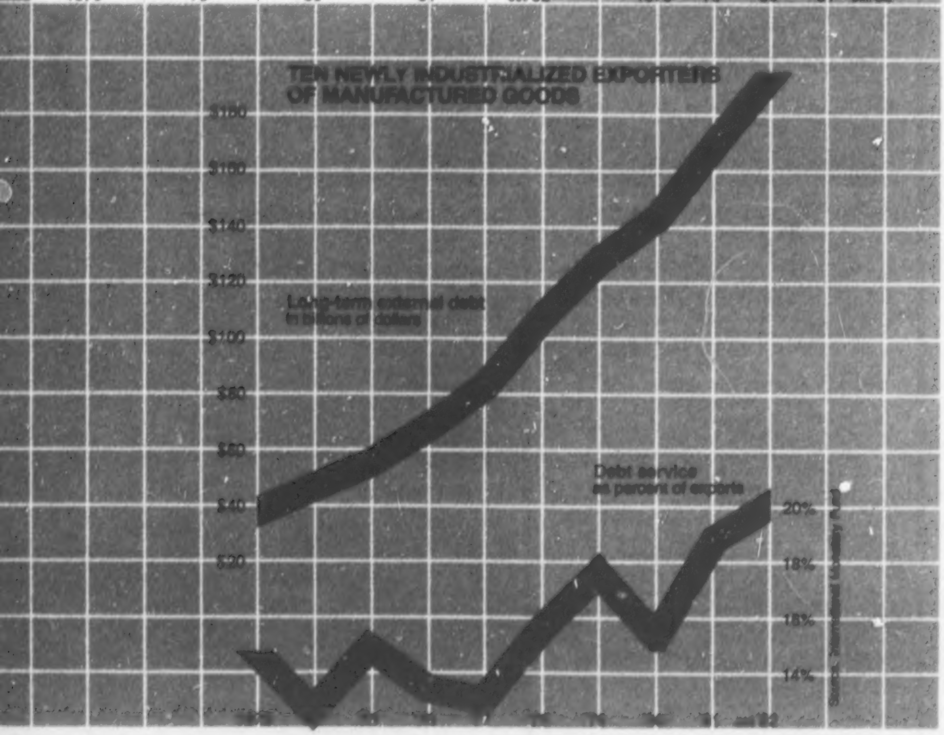
High interest rates in the U.S. have strengthened the dollar against other currencies, reversing a trend that began with President Nixon's first devaluation decree in 1971. Foreign investors have been spurning money and capital markets at home, and transferring their funds to the U.S. or to the Eurodollar market. The dollar also has been bolstered by America's perceived role as a safe haven in a troubled world, and by the Reagan Administration's success in stemming inflation. Nations whose currencies weaken against the dollar encounter hardships; most notably, OPEC oil becomes more expensive for them since the OPEC countries quote their prices in dollars. But Roger Brinner of Data Resources Inc. points out that a weakening currency also produces a side benefit: it encourages exports while discouraging imports, thus helping to strengthen a country's balance of payments. Europeans who want U.S. interest rates to come down, Brinner says, fail to realize they would "lose the competitive edge they gained from a strong dollar."



HOW VARIOUS CURRENCIES HAVE DONE AGAINST THE DOLLAR
Index: August 1971=100







Where Recession Hits Hardest

The current economic climate is all wrong for the newly industrialized nations. Because they depend so heavily on exports for their fiscal health, they are suffering out of proportion now that their best customers—the highly developed countries—are muddling through a recession. The slackening demand for goods produced by these nations has driven prices way down, but the cost of their imports, especially oil, has remained high. The effect on their balance of payments has been devastating. Of the five nations charted, four are in chronic deficit. The governments of the newly industrialized countries have sought to keep their current accounts within reason by limiting imports and deliberately reining in their economies. The results of these desperate measures can be discerned in the chart of GNP growth. In most of the countries growth has stagnated, and in Brazil, where the screws have been turned especially tight to combat steep inflation, growth has been choked off.

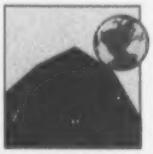
In Hock More than Ever

Newly industrialized countries borrow heavily from banks in the U.S. and Europe in an effort to expand, modernize, and stimulate their production. In less than a decade long-term external debt has increased fivefold in the ten non-oil exporters charted at left. (They are Argentina, Brazil, Greece, Hong Kong, Israel, Portugal, Singapore, South Africa, South Korea, and Yugoslavia.) As the debt increases, so does the cost of servicing it, though the burden doesn't seem quite so onerous when debt service is expressed as a percentage of export volume. This ratio has ratcheted upward, partly because of soaring interest rates. Bankers are becoming concerned about the creditworthiness of countries that have been hit especially hard by the recession. If debt keeps climbing, the newly industrialized countries may have to de-emphasize domestic ownership and allow more foreign investment within their borders. Some Latin American countries have already taken such steps. F

Research for charts: Lorraine Carson

The Largest Industrial Companies in the World

(Ranked by sales)



In 1981 the 50 largest industrial corporations in the world had their worst year since FORTUNE began to rank them eight years ago. Their total profits declined by 4.4%, or $2.3 billion. The increase in sales for the 50 companies last year was only 6.5%, and even that unimpressive gain was illusory: it ran considerably behind the average rate of inflation for the 12 countries represented on the list. Between 1974, when the list was started, and 1980 the compound annual rate of increase in sales was over 20%.

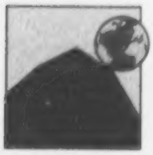
Once again, the U.S. has more companies on the list than any other country. Twenty-one of the companies are American (in red at right), and 12 of those are oil companies. Germany had seven companies on the list and Japan five. The Japanese companies showed revenue increases of 17.5% and profit increases ot 5.5%, while the German companies declined by both measures.

As they have since 1975, oil companies dominate the list this year. Twenty-two of the 50 companies on the list are in oil. Of the top ten, eight are oil companies. The joining of several sectors of the industry into a single company put Kuwait Petroleum, unlisted last year, into 19th place. The largest jump by a previously listed company was made by Du Pont, which went from No. 38 last year to No. 16 this year. Oil explained Du Pont's rise in the world: in 1981 it acquired Conoco, which ranked 25th in 1980. Next year U.S. Steel may be the big gainer, since its acquisition of Marathon Oil should give it a lift like the one Du Pont got this year.

RANK '81	RANK '80	COMPANY	HEADQUARTERS	SALES ($000)	NET INCOME ($000)
1	1	**Exxon**	New York	108,107,688	5,567,481
2	2	**Royal Dutch/Shell Group**	The Hague/London	82,291,728	3,642,142
3	3	**Mobil**	New York	64,488,000	2,433,000
4	4	**General Motors**	Detroit	62,698,500	333,400
5	5	**Texaco**	Harrison, N.Y.	57,628,000	2,310,000
6	6	**British Petroleum**	London	52,199,976	2,063,272
7	7	**Standard Oil of California**	San Francisco	44,224,000	2,380,000
8	8	**Ford Motor**	Dearborn, Mich.	38,247,100	(1,060,100)
9	12	**Standard Oil (Ind.)**	Chicago	29,947,000	1,922,000
10	9	**ENI**	Rome	29,444,315	383,234
11	11	**International Business Machines**	Armonk, N.Y.	29,070,000	3,308,000
12	10	**Gulf Oil**	Pittsburgh	28,252,000*	1,231,000
13	16	**Atlantic Richfield**	Los Angeles	27,797,436	1,671,290
14	14	**General Electric**	Fairfield, Conn.	27,240,000	1,652,000
15	17	**Unilever**	London/Rotterdam	24,095,898	800,379
16	38	**E.I. du Pont de Nemours**	Wilmington, Del.	22,810,000	1,401,000
17	15	**Française des Pétroles**	Paris	22,784,032	175,807
18	18	**Shell Oil**	Houston	21,629,000	1,701,000
19	●	**Kuwait Petroleum**	Safat (Kuwait)	20,556,871*	1,690,312*
20	22	**Elf-Aquitaine**	Paris	19,666,141	682,316
21	20	**Petróleos de Venezuela**	Caracas	19,659,115	3,316,040
22	13	**Fiat**	Turin (Italy)	19,608,480	N.A.
23	33	**Petrobrás (Petróleo Brasileiro)**	Rio de Janeiro	18,946,056	831,215
24	34	**Pemex (Petróleos Mexicanos)**	Mexico City	18,804,190	40,790
25	21	**International Telephone & Tel.**	New York	17,306,189	676,804
26	23	**Philips' Gloeilampenfabrieken**	Eindhoven (Netherlands)	17,069,155	143,682
27	24	**Volkswagenwerk**	Wolfsburg (Germany)	16,822,215	99,451
28	27	**Daimler-Benz**	Stuttgart	16,281,398	365,212
29	37	**Nissan Motor**	Yokohama (Japan)	16,245,315	490,200
30	19	**Renault**	Paris	16,229,762	(124,916)
31	26	**Siemens**	Munich	16,029,835	208,157
32	39	**Phillips Petroleum**	Bartlesville, Okla.	15,966,000	879,000
33	45	**Matsushita Electric Industrial**	Osaka (Japan)	15,738,106	714,675
34	36	**Toyota Motor**	Toyota City (Japan)	15,712,540	619,666
35	44	**Hitachi**	Tokyo	15,519,416	596,363
36	41	**Tenneco**	Houston	15,462,000	813,000
37	29	**Hoechst**	Frankfurt	15,292,750	132,167
38	42	**Nippon Steel**	Tokyo	15,196,945	341,196
39	43	**Sun**	Radnor, Pa.	15,012,000	1,076,000
40	30	**Bayer**	Leverkusen (Germany)	14,985,272	224,634
41	47	**Occidental Petroleum**	Los Angeles	14,707,543	722,216
42	●	**BAT Industries**	London	14,301,022*	370,903
43	35	**Nestlé**	Vevey (Switzerland)	14,172,074	492,604
44	46	**U.S. Steel**	Pittsburgh	13,940,500	1,077,200
45	31	**BASF**	Ludwigshafen on Rhine	13,707,434	162,890
46	48	**United Technologies**	Hartford	13,667,758	457,686
47	50	**Standard Oil (Ohio)**	Cleveland	13,457,091	1,946,898
48	28	**Peugeot**	Paris	13,396,308	(368,825)
49	40	**Imperial Chemical Industries**	London	13,338,305	376,963
50	32	**Thyssen**	Duisburg (Germany)	13,063,961	(32,341)
		TOTALS		**1,282,816,420**	**50,937,083**

THE FORTUNE DIRECTORY OF THE LARGEST INDUSTRIAL CORPORATIONS OUTSIDE THE UNITED STATES

The Foreign 500



Battered by worldwide recession, the 500 largest industrial companies outside the U.S. had a miserable time in 1981. The symbol at left traces the path of the Foreign 500's profits for the last five years. After a 13.3% decline in 1980, the drop accelerated to 24% in 1981. The increase in sales of 4.7% last year was the smallest since the first Foreign 500 in 1976. And the list of 93 money losers has never been so long.

The persistent strength of the U.S. dollar explains part of the Foreign 500's pervasive weakness. FORTUNE converts the results for every company into dollars, which rose in value against almost all foreign currencies. For example, the German mark fell 19.4% against the dollar last year. German companies were hard hit: profits were cut almost in half at both Volkswagen and Siemens, the electronics company. Four German corporations were pushed off this year's list; 58 still qualified.

Except for those that are government-owned, the 92 British companies listed showed unexpected gains in profits despite the 12.9% decline in the pound sterling relative to the dollar. Thanks to much improved productivity, British companies on the Foreign 500 lifted their total revenues by more than 10% and their profits by 7.3%. Both Plessey, the electronics company, and BOC Group, a chemical company, had profit increases of over 60%.

With 130 companies on the list, Japan had more than any other country. The 2.7% rise in value of the yen against the dollar gave the Japanese a small lift, but they didn't seem to need it. Their total sales went up by 19.7% and profits increased by 9.3%. Three Japanese companies never before on the list won rankings this year.

The Foreign 500 includes the subsidiaries of U.S. companies that are incorporated abroad. Thirty-eight such subsidiaries are on the list this year. Several of them are siblings. Three subsidiaries of IBM, for example, are listed; of them, only IBM France (No. 157) showed an increase in profits. The largest foreign subsidiary of any U.S. company is General Motors of Canada (No. 38). Next is Esso Petroleum of Britain, a subsidiary of Exxon, which ranked No. 40, up nine places from 1980.

State-owned losers

The largest losses among the Foreign 500 were suffered by state-owned enterprises. The top five losers are all state-owned; two of them, in England and Italy, are steel companies. Several other big losers among the nationalized companies, such as Sweden's SWEDYARDS, a shipbuilding company, Britain's National Coal Board, and BL (formerly British Leyland) also lost money in 1980. The most profitable state-owned enterprises were oil companies, notably those from countries that did not belong to the OPEC cartel and were not bound by OPEC's high prices. Among them were ENI (No. 3), Statoil (No. 206), and Empresa Nacional del Petróleo (No. 313). On the whole, though, the oil glut hit hard at the total profits of oil companies, which fell 37.4% from 1980.

The change of government in France is bringing big changes to French companies on the list. Six of them, including Générale d'Electricité (No. 32) and Saint-Gobain (No. 44) appear for the last time as private-sector enterprises. The Socialist government of François Mitterrand has voted to nationalize all six this year. Across the Channel, Margaret Thatcher is imbued with the opposite philosophy. British Aerospace (No. 145) is now flying on its own: the Thatcher government sold a majority interest in the company last year.

Faring worst of all were the mining companies. Overall, mining showed median declines of 10.6% in sales and 34.4% in profits. Leading the way down was once lustrous De Beers, the world's foremost producer and marketer of diamonds, which dropped 170 places to No. 339.

Several of the 11 companies that made the list for the first time this year were created by mergers. Fletcher Challenge, a New Zealand company that makes building materials and wood products, was put together from three separate corporations and is now No. 303. A big drop in rank resulted from a sundered merger: Dunlop Holdings and the Italian rubber company, Pirelli, broke up after 11 years of disappointing union.

In the auto industry the Japanese were the stars. The 20 Japanese manufacturers of motor vehicles more than doubled their profits last year. The median for the industry worldwide was a relatively measly 4.2% increase. Among the foreign affiliates of General Motors, Ford, and Chrysler, aggregate income fell 41.4%. Of them, only Ford did well abroad, more than doubling its profits last year. Volvo's increase in sales, which totaled $9.5 billion, brought it up 34 places to No. 35. Almost all of that increase came from Volvo's acquisition of Beijerinvest, a giant Swedish trading company.

—TOM POST and LOUIS S. RICHMAN

THE 500 LARGEST INDUSTRIAL CORPORATIONS OUTSIDE THE U.S. (ranked by sales)

RANK '81	RANK '80	COMPANY	COUNTRY	INDUSTRY	SALES[1] ($000)	ASSETS[2] ($000)	NET INCOME[3] ($000)	STOCK-HOLDERS' EQUITY[4] ($000)	EMPLOYEES
1	1	**Royal Dutch/Shell Group**	Neth.-Britain	Petroleum	82,291,728	65,255,540	3,642,142	25,247,360	166,000
2	2	**British Petroleum**	Britain	Petroleum	52,199,976	47,949,685	2,063,272	14,793,375	153,250
3	3	**ENI[5]**	Italy	Petroleum	29,444,315[6]	22,133,664[6]	383,234[6]	2,194,836[6]	122,796[6]
4	6	**Unilever**	Britain-Neth.	Food products; soaps, cosmetics	24,095,898	12,552,634	800,379	4,841,503	292,000
5	5	**Française des Pétroles**	France	Petroleum	22,784,032[6]	13,982,819[6]	175,807[6]	3,739,106[6]	47,260[6]
6	96	**Kuwait Petroleum[5,7,8]**	Kuwait	Petroleum	20,556,871*	8,856,262	1,690,312*	5,508,888	12,586
7	9	**Elf-Aquitaine[5]**	France	Petroleum	19,666,141[6]	21,113,629[6]	682,316[6]	5,543,664[6]	58,600[6]
8	8	**Petróleos de Venezuela[5]**	Venezuela	Petroleum	19,659,115	20,714,040	3,316,040	16,741,987	42,150
9	4	**Fiat**	Italy	Motor vehicles and parts	19,608,480	N.A.	N.A.	N.A.	314,845
10	19	**Petrobrás (Petróleo Brasileiro)[5]**	Brazil	Petroleum	18,946,056	14,036,488	831,215	5,448,184	66,207
11	20	**Pemex (Petróleos Mexicanos)[5]**	Mexico	Petroleum	18,804,190	45,072,720	40,790	20,715,240	131,000
12	10	**Philips' Gloeilampenfabrieken**	Netherlands	Electronics, appliances	17,069,155	17,405,211	143,682	5,766,571	348,100
13	11	**Volkswagenwerk**	Germany	Motor vehicles and parts	16,822,215	11,337,244	99,451	2,700,248	246,906
14	13	**Daimler-Benz**	Germany	Motor vehicles and parts	16,281,398	9,127,723	365,212	683,125	187,961
15	23	**Nissan Motor[9]**	Japan	Motor vehicles and parts	16,245,315	11,698,941	490,200	4,194,905	98,641
16	7	**Renault[5]**	France	Motor vehicles and parts	16,229,762[6]	11,831,738[6]	(124,916)[6]	1,872,104[6]	215,844[6]
17	12	**Siemens[10]**	Germany	Electronics; computers	16,029,835	14,653,409	208,157	3,693,591	338,000
18	27	**Matsushita Electric Industrial[11]**	Japan	Electronics, appliances	15,738,106	13,465,400	714,675	5,827,819	117,888
19	22	**Toyota Motor[7]**	Japan	Motor vehicles	15,712,540[12]	8,052,556[12]	619,666[12]	4,865,887[12]	48,757[12]
20	26	**Hitachi[9]**	Japan	Electronics, appliances	15,519,416	16,152,236	596,363	4,661,074	151,295
21	15	**Hoechst**	Germany	Chemicals	15,292,750[6]	11,670,887[6]	132,167[6]	2,410,112[6]	184,722[6]
22	25	**Nippon Steel[9]**	Japan	Metal manufacturing—steel	15,196,945	16,734,347	341,196	2,734,408	74,431
23	16	**Bayer**	Germany	Chemicals	14,985,272[6]	12,853,910[6]	224,634[6]	3,023,007[6]	180,906[6]
24	29	**BAT Industries**	Britain	Tobacco	14,301,022*	9,552,020	370,903	4,247,470	169,500
25	21	**Nestlé**	Switzerland	Food products; beverages	14,172,074	9,943,998	492,604	4,850,635	145,815
26	17	**BASF**	Germany	Chemicals	13,707,434[6]	8,884,910[6]	162,890[6]	1,387,798[6]	116,646[6]
27	14	**Peugeot**	France	Motor vehicles and parts	13,396,308[6]	9,995,869[6]	(368,825)[6]	1,790,310[6]	218,000[6]
28	24	**Imperial Chemical Industries**	Britain	Chemicals	13,338,305	13,669,270	376,983	5,658,825	132,400
29	18	**Thyssen[10]**	Germany	Metal refining—steel; indus. equip.	13,063,961	7,796,044	(32,341)	1,220,000	149,264
30	28	**Mitsubishi Heavy Industries[9]**	Japan	Motor vehicles; indus. equip.	12,408,234	17,760,984	101,372	1,318,161	95,000
31	38	**Idemitsu Kosan[9]**	Japan	Petroleum	11,804,081[12]	8,903,064[12]	55,424[12]	117,319[12]	7,811[12]
32	30	**Générale d'Electricité**	France	Electronics, appliances	10,485,315[6]	11,999,194[6]	74,607[6]	930,089[6]	180,400[6]
33	40	**Canadian Pacific**	Canada	Metal refining—steel; mining	10,290,790	13,765,693	405,065	3,312,301	129,223
34	41	**National Coal Board[5,9]**	Britain	Mining—coal	9,795,489	9,615,378	(135,239)	175,475	296,000
35	69	**Volvo**	Sweden	Motor vehicles and parts	9,538,577	6,674,887	89,988	694,538	76,085
36	42	**Toshiba[9]**	Japan	Electronics, appliances	9,535,911	9,741,374	231,129	1,329,546	99,000
37	32	**Petrofina**	Belgium	Petroleum	9,244,555	6,281,473	284,308	1,411,682	21,000
38	43	**General Motors of Canada**	Canada	Motor vehicles and parts	8,688,965[13]	2,933,119	(8,592)	737,977	43,076
39	34	**Veba Oel**	Germany	Petroleum; chemicals	8,574,107[6]	3,545,940[6]	32,113[6]	656,920[6]	24,228[6]
40	49	**Esso Petroleum**	Britain	Petroleum	8,509,687	6,545,635	415,449	912,759	9,105
41	60	**General Electric Co.[9]**	Britain	Industrial equipment; electronics	8,100,318	7,547,636	755,047	3,594,772	193,000
42	36	**Ruhrkohle**	Germany	Mining—coal	8,091,598	5,746,964	12,082	273,595	136,552
43	39	**Thomson-Brandt**	France	Electronics, appliances	8,079,164[6]	7,905,121[6]	(13,625)[6]	547,470[6]	129,000[6]
44	31	**Saint-Gobain[14]**	France	Building materials; metal products	8,049,020[6]	6,907,227[6]	83,180[6]	1,661,268[6]	135,559[6]
45	35	**Montedison**	Italy	Chemicals	7,945,030[6]	7,710,360[6]	(550,910)[6]	825,720[6]	94,203[6]
46	33	**Esso**	Germany	Petroleum	7,739,899[13]	2,590,622	180,518	582,443	4,592
47	37	**Pechiney Ugine Kuhlmann**	France	Metal refining—aluminum, steel	7,584,684[6]	N.A.	N.A.	N.A.	71,000[6]
48	[illegible]8	**Honda Motor[15]**	Japan	Motor vehicles and parts	7,545,423	4,655,544	422,151	1,608,444	38,481
49	47	**DSM[5]**	Netherlands	Chemicals	7,375,625[6]	4,104,216[6]	40,488[6]	935,881[6]	30,020[6]
50	67	**Maruzen Oil[9]**	Japan	Petroleum	7,347,172	5,346,461	(120,060)	(7,601)	4,579

N.A. Not available.

*Fortune estimate.

[1] All companies on the list have derived more than 50% of their sales from manufacturing and/or mining. Sales do not include excise taxes or customs duties levied according to either volume or value of sales, and so the figures for some companies—most of which sell gasoline, liquor, or tobacco—may be be lower than those published by the companies themselves. Unless otherwise noted, figures exclude intracompany transactions and include consolidated subsidiaries more than 50% owned, either fully or on a prorated basis. Figures have been converted to dollars using an exchange rate that consists of the average rate in the official exchange market during each company's fiscal year (ending December 31, 1981, unless otherwise noted).

[2] Total shown at each company's year-end. Figures have been converted to dollars at the market rate prevailing at each company's year-end.

[3] After taxes, minority interest, and extraordinary items. Figures have been converted to dollars at the average market rate during each company's fiscal year. Figures in parentheses are losses.

[4] Total at each company's year-end. Figures have been converted to dollars at the market rate prevailing at each company's year-end. Minority interest is not included.

[5] Government-owned.

[6] Also includes certain subsidiaries owned 50% or less, either fully or on a prorated basis.

[7] Figures are for fiscal year ending June 30, 1981.

[8] Named changed from Kuwait National Petroleum on July 1, 1981.

[9] Figures are for fiscal year ending March 31, 1981.

[10] Figures are for fiscal year ending September 30, 1981.

[11] Figures are for fiscal year ending November 20, 1981.

THE 500 LARGEST INDUSTRIALS OUTSIDE THE U.S.

RANK '81	RANK '80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCKHOLDERS' EQUITY ($000)	EMPLOYEE
51	72	**Hyundai Group**	South Korea	Shipbuilding; motor vehicles; indus. equip.	7,211,590	5,625,340	106,431	1,066,231	135,000
52	52	**Ciba-Geigy**[10]	Switzerland	Chemicals; pharmaceuticals	7,061,961	8,897,737	273,152	5,507,858	80,179
53	54	**Esso**	France	Petroleum	6,996,730	2,583,092	55,574	358,291	4,783
54	57	**British Steel**[5,9]	Britain	Metal refining—steel	6,911,710	7,637,383	(2,386,576)	2,250,360	120,900
55	50	**Mannesmann**	Germany	Metal products; indus. equip.	6,852,006	4,809,518	115,483	1,115,623	106,660
56	65	**Nippon Kokan**[9]	Japan	Metal manufacturing—steel	6,800,386	11,500,692	169,374	1,081,647	37,254
57	78	**Imperial Oil**	Canada	Petroleum	6,677,691	5,981,644	387,898	3,407,244	16,314
58	51	**Rhône-Poulenc**	France	Chemicals	6,649,021[6]	5,874,181[6]	(61,995)[6]	985,040[6]	89,350[6]
59	46	**Schneider**	France	Industrial equipment; metal refining—steel	6,609,603[6]	10,452,945[6]	(63,346)[6]	178,750[6]	107,000[6]
60	55	**Gutehoffnungshütte**[7]	Germany	Indus. and transportation equip.	6,601,801	4,979,372	44,478	571,605	86,896
61	45	**Fried. Krupp**	Germany	Metal refining—steel; indus. equip.	6,589,828	4,694,457	(20,858)	714,439	82,194
62	58	**AEG-Telefunken**	Germany	Electronics, appliances	6,589,169[6]	4,828,564[6]	1,389[6]	359,262[6]	123,700[6]
63	71	**Sumitomo Metal Industries**[9]	Japan	Metal refining—steel	6,284,568	9,358,523	223,164	1,153,103	33,983
64	94	**Indian Oil**[5,9,16]	India	Petroleum	6,264,507	2,895,093	102,107	613,667	21,099
65	56	**Ford Motor**	Britain	Motor vehicles and parts	6,228,326[13]	5,141,775	334,420	2,320,980	75,100
66	44	**Michelin**	France	Rubber products	6,227,783[6]	8,377,541[6]	(66,628)[6]	2,260,877[6]	115,000[6]
67	66	**Toa Nenryo Kogyo**	Japan	Petroleum	6,159,826	3,614,602	71,908	742,587	4,021
68	62	**Rio Tinto-Zinc**	Britain	Mining—alum., lead, zinc, copper, iron	6,122,325	9,054,695	377,388	2,762,962	65,759
69	83	**Mitsubishi Electric**[9]	Japan	Electronics, appliances	6,058,141	5,491,383	158,203	1,123,962	60,011
70	92	**George Weston Holdings**[9]	Britain	Food products	6,049,054	2,239,396	104,630	763,490	N.A.
71	80	**Grand Metropolitan**[10]	Britain	Beverages; food products	6,038,071	5,369,514	323,537	2,209,577	131,757
72	73	**Ford Motor of Canada**	Canada	Motor vehicles and parts	6,011,674	1,831,415	(82,501)	583,160	34,200
73	86	**Schlumberger**	Neth. Antil.	Measuring and scientific equip.	5,977,938	6,525,333	1,265,975	4,234,633	85,000
74	75	**Chinese Petroleum**[5]	Taiwan	Petroleum	5,957,679[12]	3,636,416[12]	62,379[12]	1,370,166[12]	20,006[12]
75	70	**Imperial Group**[17]	Britain	Tobacco; food; beverages	5,914,872*	3,509,915	119,069	1,482,200	122,400
76	122	**Nippon Mining**[9]	Japan	Petroleum; metal refining—nonferrous	5,914,490	4,370,170	37,076	356,299	8,240
77	63	**Akzo Group**	Netherlands	Chemicals	5,826,035	4,153,218	96,070	997,429	77,800
78	59	**BL**[8]	Britain	Motor vehicles	5,814,252	4,278,302	(1,007,315)	1,274,050	117,043
79	53	**ESTEL**	Netherlands	Metal manufacturing—steel	5,775,807	4,134,562	(280,763)	559,834	72,000
80	61	**Robert Bosch**	Germany	Motor-vehicle parts; electronics, appliances	5,751,321	4,120,152	110,478	1,200,840	112,796
81	114	**Barlow Rand**[10]	South Africa	Mining—coal, gold, chrome; indus. equipment	5,584,428	3,672,477	307,108	1,061,627	116,398
82	84	**Kawasaki Steel**[9]	Japan	Metal manufacturing—steel	5,559,880[12]	8,129,376[12]	263,524[12]	1,244,027[12]	29,563[12]
83	106	**Dalgety**[7]	Britain	Food products	5,477,481	1,499,031	45,321	478,254	24,212
84	105	**Mitsubishi Oil**[9]	Japan	Petroleum	5,454,173	4,168,417	33,703	139,256	2,920
85	95	**Toyo Kogyo**[17]	Japan	Motor vehicles	5,429,881	3,355,733	94,513	636,086	28,546
86	124	**Daikyo Oil**[9]	Japan	Petroleum	5,336,967*	2,669,139	19,609*	118,330	1,963
87	107	**Broken Hill Proprietary**[18]	Australia	Metal refining—steel	5,322,036	6,911,844	310,215	4,299,359	74,000
88	76	**ENPETROL**[5]	Spain	Petroleum; chemicals	5,317,401[6]	3,218,694[6]	22,690[6]	630,287[6]	6,067[6]
89	74	**Electrolux**	Sweden	Electronics, appliances	5,283,097	3,964,859	190,903	690,166	101,700
90	99	**Kobe Steel**[9]	Japan	Metal refining—steel	5,267,185[12]	6,528,906[12]	120,964[12]	763,684[12]	30,443[12]
91	101	**Lucky Group**	South Korea	Petroleum; electronics, appliances	5,256,989	3,116,267	45,212	440,066	45,764
92	132	**Thorn EMI**[9]	Britain	Electronics, appliances	5,214,200	3,520,876	156,297	1,287,036	106,597
93	125	**Samsung Group**	South Korea	Electronics, appliances; food prod.; textiles	5,100,552	3,759,320	18,672	678,200	82,840
94	64	**Brown Boveri**	Switzerland	Electrical & indus. equip.; electronics	5,057,367[6]	N.A.	N.A.	N.A.	105,400[6]
95	77	**Alcan Aluminium**	Canada	Metal refining—aluminum	4,978,000	6,339,000	264,000	2,631,000	66,100
96	82	**Metallgesellschaft**[10]	Germany	Metal manufacturing—nonferrous	4,858,036	2,047,976	14,342	280,602	26,829
97	127	**Nippon Electric**[9]	Japan	Electronics, appliances	4,853,583	5,458,004	102,310	824,860	64,147
98	108	**Mitsubishi Chemical Industries**	Japan	Chemicals	4,819,193	4,989,658	27,591	518,567	13,978
99	90	**YPF (Yacimientos Petrolíferos)**[5]	Argentina	Petroleum	4,815,778	5,468,693	(3,820,963)	540,300	32,265
100	97	**Türkiye Petrolleri**[5]	Turkey	Petroleum	4,759,508	3,519,501	207,936	469,346	10,397

●Not on last year's list

N.A. Not available

*Fortune estimate

[12] Parent only

[13] Revenues include certain sales to foreign affiliates of the U.S. parent company

[14] Name changed from Saint-Gobain-Pont-à-Mousson on June 15, 1981.

[15] Figures are for fiscal year ending February 28, 1981.

[16] Includes only wholly owned subsidiaries.

[17] Figures are for fiscal year ending October 31, 1981.

[18] Figures are for fiscal year ending May 31, 1981.

RANK 81	'80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCK-HOLDERS' EQUITY ($000)	EMPLOYEES
01	126	**Sony**[16,17]	Japan	Electronics, appliances	4,748,214	4,946,948	282,842	1,821,932	38,555
02	89	**Ford-Werke**	Germany	Motor vehicles and parts	4,682,872	2,004,888	63,761	472,076	49,403
03	87	**Degussa**[16]	Germany	Metal products; chemicals	4,638,735	1,453,723	29,522	270,037	21,077
04	79	**Usinor**[6]	France	Metal refining—steel	4,631,680[6]	7,317,440[6]	(777,271)[6]	773,567[6]	58,106[6]
05	81	**Adam Opel**	Germany	Motor vehicles and parts	4,482,654[12,13]	2,780,909[12]	(263,282)[12]	772,468[12]	60,612[12]
06	116	**Sanyo Electric**[19]	Japan	Electronics, appliances	4,468,312	4,140,385	145,149	1,316,445	21,895
07	48	**Pirelli**[20]	Italy	Rubber products	4,450,000	N.A.	N.A.	N.A.	77,000
08	113	**Allied-Lyons**[18,21]	Britain	Beverages; food products	4,444,359	3,856,780	121,550	1,954,066	83,971
09	103	**Taiyo Fishery**[22]	Japan	Food products	4,444,224	2,122,877	9,029	99,278	10,496
10	●	**Texaco**	Britain	Petroleum	4,383,196[12]	1,899,357	106,681	876,802	5,170
11	123	**Showa Oil**	Japan	Petroleum	4,380,792	2,945,998	(96,110)	42,533	2,048
12	85	**Charbonnages de France**	France	Chemicals; mining—coal	4,289,506[6]	4,854,101[6]	(49,318)[6]	582,264[6]	74,000[6]
13	129	**ÖMV**[5]	Austria	Petroleum	4,271,013	2,323,863	8,248	813,852	9,185
14	91	**Solvay**	Belgium	Chemicals, plastics	4,256,637[6]	3,528,572[6]	(17,711)[6]	1,220,753[6]	48,237[6]
15	88	**Salzgitter**[5,10]	Germany	Metal refining—steel; shipbuilding	4,250,519	4,052,373	(175,708)	290,331	56,944
16	115	**Mobil Oil**[18]	Germany	Petroleum	4,218,009[12]	1,650,357	99,924	444,149	2,115
17	98	**VÖEST-Alpine**[5]	Austria	Metal refining—steel; industrial equip.	4,209,068	5,610,965	(9,356)	407,051	75,863
18	121	**Thomas Tilling**	Britain	Industrial equip.; building materials	4,155,122	2,360,238	85,125	990,055	44,200
19	111	**Esso Italiana**	Italy	Petroleum	4,086,132[12,13]	817,788[12]	35,415[12]	75,216[12]	3,397[12]
20	119	**Courtaulds**[9]	Britain	Textiles	4,000,790	2,463,341	(266,969)	729,358	88,000
21	120	**Deutsche Texaco**	Germany	Petroleum	3,942,401[12]	1,442,442	66,701	309,503	4,843
22	135	**Cockerill Sambre**[5,23]	Belgium	Metal refining—steel	3,925,250[6]	4,233,404[6]	(464,989)[6]	622,135[6]	42,537[6]
23	130	**Ishikawajima-Harima Heavy Ind.**[9]	Japan	Industrial equipment; shipbuilding	3,872,147	7,881,187	34,082	500,699	42,000
24	155	**ASEA**[24]	Sweden	Electronics, appliances; indus. equip.	3,847,056	4,455,025	40,525	506,559	56,107
25	128	**CEPSA (Española de Petróleos)**	Spain	Petroleum	3,842,033[12]	1,438,120[12]	25,183[12]	183,325[12]	4,566[12]
26	93	**Flick Group**	Germany	Paper and wood products; chemicals	3,832,797	3,509,090	61,348	795,152	45,690
27	136	**Gulf Canada**	Canada	Petroleum	3,823,093	3,766,345	249,423	1,791,290	11,367
28	131	**Neste**[5]	Finland	Petroleum	3,785,781[12]	2,371,655[12]	14,258[12]	132,042[12]	5,135[12]
29	139	**Korea Oil**[25]	South Korea	Petroleum	3,762,201	1,286,167	(16,084)	170,463	2,063
30	100	**Guest, Keen & Nettlefolds**	Britain	Motor-vehicle parts	3,760,303	3,067,830	(49,251)	1,244,367	78,483
31	148	**Asahi Chemical Industry**[9]	Japan	Chemicals; textiles	3,690,812	3,509,887	81,307	803,197	20,964
32	154	**Texaco Canada**	Canada	Petroleum	3,649,858	2,426,935	263,859	1,246,203	4,522
33	118	**BMW (Bayerische Motoren Werke)**	Germany	Motor vehicles and parts	3,585,053	2,202,788	64,096	541,496	39,777
34	102	**BSN-Gervais Danone**	France	Food products; beverages	3,563,515[6]	2,443,603[6]	109,185[6]	635,351[6]	41,751[6]
35	104	**Italsider**[5]	Italy	Metal manufacturing—steel	3,560,534[12]	7,711,704[12]	(1,510,775)[12]	1,528,968[12]	48,360[12]
36	109	**ALUSUISSE (Swiss Aluminum)**	Switzerland	Metal refining—aluminum	3,519,768	5,034,079	(26,725)	1,601,386	41,243
37	175	**Kawasaki Heavy Industries**[9]	Japan	Indus. equip.; shipbuilding, trans. equip.	3,507,887	4,903,558	13,569	477,082	29,049
38	112	**IBM Deutschland**	Germany	Office equipment (includes computers)	3,506,962[13]	2,452,670	239,884	625,562	27,263
39	110	**Bowater**	Britain	Paper and wood products	3,502,293	2,136,949	94,043	759,489	34,900
40	142	**Reed International**[9]	Britain	Publishing, printing; paper, pulp	3,463,108	2,226,919	53,581	1,112,455	58,200
41	143	**Ranks Hovis McDougall**[26]	Britain	Food products	3,462,960	1,293,421	70,899	587,476	50,412
42	134	**Roche/Sapac**	Switzerland	Pharmaceuticals; chemicals	3,461,821	5,572,890	129,334	3,837,891	44,033
43	152	**Isuzu Motors**[17]	Japan	Motor vehicles and parts	3,404,311	2,987,253	36,168	392,667	20,902
44	190	**CSR**[9]	Australia	Sugar; mining; bldg. materials; chemicals	3,391,583	2,681,642	147,351	1,245,040	14,100
45	140	**British Aerospace**	Britain	Aerospace	3,368,081	3,064,575	126,920	1,378,417	79,180
46	165	**Norsk Hydro**[5,7]	Norway	Petroleum; chemicals	3,360,390	2,910,731	71,698	614,072	15,174
47	117	**Sacilor**	France	Metal refining—steel	3,327,173[6]	5,073,568[6]	(531,887)[6]	204,305[6]	38,547[6]
48	151	**Bridgestone Tire**	Japan	Rubber products	3,296,006	2,763,097	71,103	987,805	33,498
49	159	**Snow Brand Milk Products**[9]	Japan	Food products	3,280,975	1,437,067	9,484	205,092	16,762
50	171	**BOC Group**[10,27]	Britain	Chemicals—gas; indus. equip.	3,277,564	3,248,465	96,006	1,414,634	42,100

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[9] Figures are for fiscal year ending November 30, 1981

[0] Figures reflect the dissolution of Dunlop Pirelli Union (1980 rank: 48) on October 15, 1981

[1] Name changed from Allied Breweries on October 30, 1981

[2] Figures are for fiscal year ending January 31, 1981

[3] Figures include Hainaut-Sambre (1980 rank: 337), acquired June 26, 1981

[24] Figures include Svenska Fläktfabriken (1980 rank: 424), acquired October 2, 1981

[25] Figures are not consolidated with those of Sunkyong (1981 rank: 251), which acquired Korea Oil on November 28, 1980

[26] Figures are for fiscal year ending August 31, 1981

[27] Name changed from BOC International on February 17, 1982

THE 500 LARGEST INDUSTRIALS OUTSIDE THE U.S.

RANK '81	RANK '80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCK-HOLDERS' EQUITY ($000)	EMPLOYE
151	153	**BICC**	Britain	Industrial equipment	3,251,579	1,686,349	71,748	538,690	52,00
152	133	**Esso**	Belgium	Petroleum, chemicals	3,232,047[12,13]	630,203[12]	23,334[12]	216,168[12]	1,61
153	160	**L.M. Ericsson Telephone**	Sweden	Electronics, appliances	3,216,898[6]	3,988,393[6]	85,280[6]	665,613[6]	69,86
154	141	**Saab-Scania**	Sweden	Motor vehicles and parts	3,215,648	2,643,826	79,002	435,541	40,02
155	181	**Fujitsu**[9]	Japan	Office equip. (includes computers); electronics	3,209,214	3,143,057	123,705	958,137	46,60
156	161	**Komatsu**	Japan	Industrial equipment	3,201,858	3,992,825	151,319	1,268,167	23,60
157	144	**IBM France**	France	Office equipment (includes computers)	3,196,009[12]	2,023,548[12]	155,764[12]	927,258[12]	20,59
158	145	**Sumitomo Chemical**	Japan	Chemicals	3,160,421	3,005,084	10,679	481,140	11,53
159	172	**Unigate**[9]	Britain	Food products	3,153,322	1,346,198	103,652	673,545	37,30
160	138	**Statsföretag Group**[5]	Sweden	Paper and wood prod., mining—iron, metal prods.	3,091,411	4,183,712	(169,011)	655,995	46,08
161	147	**Aérospatiale**[5]	France	Aerospace	3,057,200[12]	4,857,972[12]	29,343[12]	255,386[12]	35,39
162	179	**Toray Industries**[9]	Japan	Chemicals	3,030,364	3,241,426	119,099	850,842	33,10
163	48	**Dunlop Holdings**[26]	Britain	Rubber products	2,951,006	2,081,605	(83,098)	513,220	75,00
164	158	**Sandoz**	Switzerland	Pharmaceuticals; dyes	2,946,426	3,388,676	115,997	1,911,619	36,35
165	157	**Rolls-Royce**[5]	Britain	Aerospace	2,924,658	2,619,720	(6,080)	1,108,785	56,00
166	162	**Burmah Oil**	Britain	Petroleum	2,853,518	1,997,345	(25,132)	670,825	26,90
167	236	**Koa Oil**[9]	Japan	Petroleum	2,848,031[12]	2,026,293[12]	55,706[12]	162,296[12]	1,37
168	193	**Philippine National Oil**[5]	Philippines	Petroleum	2,840,889	2,084,282	45,258	373,402	5,28
169	166	**Hawker Siddeley Group**	Britain	Industrial equipment; electronics	2,827,372	2,352,386	208,151	1,106,679	52,70
170	205	**Ube Industries**[9]	Japan	Chemicals; cement	2,822,330	3,350,023	4,070	254,436	14,81
171	212	**Ultramar**	Britain	Petroleum	2,822,305	1,784,206	183,830	600,927	4,50
172	185	**Iscor**[5,7,28]	South Africa	Metal refining—steel	2,806,613[12]	3,888,797[12]	92,116[12]	1,978,472[12]	62,65
173	214	**Sharp**[9]	Japan	Electronics, appliances	2,806,225	2,829,812	111,430	777,867	20,69
174	178	**Bertelsmann**[7]	Germany	Publishing, printing	2,803,605[6]	1,300,538[6]	10,258[6]	197,210[6]	30,11
175	197	**Koor Industries**	Israel	Metal prods.; electronics; chemicals; food	2,800,000	2,600,000	80,000	426,000	29,60
176	208	**Beecham Group**[9]	Britain	Pharmaceuticals; soaps, cosmetics; bev.	2,795,335	2,323,140	206,369	1,245,735	33,90
177	233	**Bass**[10]	Britain	Beverages	2,751,251	2,902,109	211,171	1,843,568	77,42
178	170	**Zambia Industrial & Mining**[5,9]	Zambia	Mining—copper; food products	2,749,349	5,235,158	25,078	1,164,289	125,04
179	156	**SKF**	Sweden	Metal products	2,695,681	2,909,118	112,635	770,495	50,45
180	207	**Nippondenso**	Japan	Motor-vehicle parts	2,690,856	2,209,216	118,710	1,162,056	31,74
181	163	**Rank Xerox**[17]	Britain	Office equipment	2,669,092	2,420,786	256,344	1,291,669	33,78
182	176	**Lucas Industries**[29]	Britain	Motor-vehicle parts	2,665,772	1,724,908	(77,915)	844,634	72,73
183	191	**Kubota**[30]	Japan	Industrial and farm equipment	2,660,511	2,760,920	72,470	1,126,873	19,00
184	146	**Massey-Ferguson**[17]	Canada	Farm and industrial equipment	2,646,300	2,503,400	(194,800)	569,700	39,78
185	217	**Lafarge Coppée**	France	Building materials	2,618,208[6]	3,137,714[6]	67,624[6]	514,249[6]	29,47
186	149	**Saarbergwerke**[6]	Germany	Petroleum; mining—coal	2,601,152	N.A.	N.A.	N.A.	33,39
187	216	**PETROGAL (Petróleos de Portugal)**[5]	Portugal	Petroleum	2,595,791[12]	2,570,410[12]	(22,912)[12]	189,336[12]	6,80
188	221	**Sumitomo Electric Industries**[9]	Japan	Metal products	2,585,906	2,171,515	39,464	423,813	18,97
189	184	**Cadbury Schweppes**	Britain	Food products; beverages	2,576,080[6]	1,649,773	69,519	735,743	36,46
190	231	**Canada Development Corp.**	Canada	Chemicals	2,574,853	5,979,252	70,992	1,070,656	20,00
191	187	**Olivetti**	Italy	Office equipment (includes computers)	2,569,919	N.A.	N.A.	N.A.	53,47
192	168	**Vallourec**	France	Metal products—steel tubes, building materials	2,558,300[F]	2,331,303[6]	23,611[6]	338,517[6]	30,00
193	229	**Grupo Industrial Alfa**	Mexico	Metal refining—steel; chemicals	2,556,065	4,581,710	(239,029)	1,179,061	41,29
194	182	**Esso Nederland**	Netherlands	Petroleum	2,532,478	1,005,128	1,006	414,499	1,76
195	195	**Metal Box**[2]	Britain	Metal products	2,517,921	1,746,907	(35,726)	637,720	55,30
196	192	**Noranda Mines**	Canada	Mining; metal refining	2,497,857	4,424,397	137,480	2,418,800	31,70
197	275	**Ssangyong Cement Industrial**	South Korea	Petroleum; building materials	2,494,093	2,090,158	N.A.	211,453	12,01
198	234	**Haci Ömer Sabanci Holding**	Turkey	Textiles; rubber products	2,480,828[6]	2,503,503[6]	28,189[6]	58,236[6]	26,18
199	232	**Dai Nippon Printing**[18]	Japan	Publishing, printing	2,460,857	1,749,384	107,279	954,890	12,80
200	218	**Koç Holding**	Turkey	Motor vehicles and parts; appliances	2,448,737[6]	1,279,127[6]	32,010[6]	137,853[6]	27,045

●Not on last year's list

N.A. Not available

[F] Fortune estimate

[28] Name changed from South African Iron & Steel on September 1, 1981

[29] Figures are for fiscal year ending July 31, 1981

[30] Figures are for fiscal year ending April 15, 1981

RANK 81	'80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCK-HOLDERS' EQUITY ($000)	EMPLOYEES
01	174	**VIAG[5]**	Germany	Metal refining—aluminum	2,429,762[6]	2,801,782[6]	4,210[6]	851,449[6]	26,300[6]
02	199	**Canada Packers[9]**	Canada	Food products	2,415,928	440,319	22,166	210,551	16,000
03	213	**Furukawa Electric[9]**	Japan	Metal refining—copper	2,394,472	2,393,342	24,417	258,457	13,472
04	225	**Conoco**	Britain	Petroleum	2,393,957[6,11]	1,328,819	208,354	579,096	2,319
05	220	**International Thomson Organisation**	Canada	Petroleum; publishing, printing	2,393,031	1,391,439	88,165	323,444	22,500
06	266	**Statoil[9]**	Norway	Petroleum	2,390,481	2,754,198	178,050	578,663	2,645
07	200	**Asahi Glass**	Japan	Building materials; chemicals	2,390,083	2,732,835	107,830	1,005,395	16,719
08	264	**Suzuki Motor[9]**	Japan	Motor vehicles	2,368,291	1,411,810	48,561	251,485	14,226
09	177	**Chemische Werke Hüls**	Germany	Chemicals	2,356,559[12]	1,363,049[12]	274[12]	422,027[12]	17,747[12]
10	239	**Fuji Photo Film[31]**	Japan	Chemicals	2,335,972	2,205,913	226,532	1,108,682	15,329
11	206	**Steel Authority of India[5,9]**	India	Metal refining—steel	2,335,568	6,367,036	122	3,471,370	197,154
12	256	**Yamaha Motor[32]**	Japan	Motor vehicles and parts	2,333,829	1,584,159	46,566	274,980	14,802
13	227	**Kanebo[32]**	Japan	Textiles; soaps, cosmetics	2,330,649	2,213,705	(27,200)	82,257	22,693
14	186	**Deutsche Babcock[10]**	Germany	Metal products; industrial equipment	2,330,389	3,427,433	15,353	329,351	30,921
15	180	**IMETAL**	France	Mining—nonferrous	2,309,803[6]	1,890,778[6]	21,475[6]	632,657[6]	22,000[6]
16	188	**Avions M. Dassault-Bréguet**	France	Aerospace	2,305,649[12]	3,868,373[12]	54,648[12]	313,121[12]	15,789[12]
17	183	**L'Air Liquide**	France	Chemicals, gases	2,303,514[6]	2,250,927[6]	120,066[6]	693,915[6]	N.A.
18	137	**Métallurgie Hoboken-Overpelt[10]**	Belgium	Metal refining—nonferrous	2,292,680[12]	953,386[12]	11,273[12]	203,919[12]	6,814[12]
19	173	**Tube Investments**	Britain	Metal prod.; metal refin.—aluminum	2,274,058	1,515,340	(76,815)	546,924	45,200
20	219	**Rothmans International[9]**	Britain	Tobacco	2,256,830	2,337,972	47,182	621,981	24,465
21	201	**Matsushita Electric Works[22]**	Japan	Electronics, appliances; building materials	2,232,435	1,564,786	70,954	724,004	14,966
22	297	**Pohang Iron & Steel**	South Korea	Metal refining—steel	2,229,589[12]	3,385,831[12]	64,946[12]	708,580[12]	14,771[12]
23	196	**Union International**	Britain	Food products	2,222,375	771,314	2,679	152,869	N.A.
24	●	**Petro-Canada[5]**	Canada	Petroleum	2,207,571	5,574,101	54,116	1,382,829	5,801
25	167	**Klöckner-Werke[10]**	Germany	Metal refining—iron, steel	2,201,960	2,041,788	(42,118)	324,315	30,376
26	164	**Tabacalera[5]**	Spain	Tobacco	2,177,370	493,711	17,761	73,906	8,696
27	198	**Consolidated Gold Fields[7]**	Britain	Building materials; mining—gold	2,162,381	2,185,146	261,628	1,323,401	102,779
28	268	**Fuji Heavy Industries[9]**	Japan	Motor vehicles	2,147,587[12]	1,359,647[12]	52,037[12]	292,766[12]	12,910[12]
29	267	**Northern Telecom**	Canada	Telecommunications equipment	2,144,598	1,810,088	113,998	719,429	35,444
30	251	**Canon**	Japan	Photographic equipment, office machines	2,138,700	2,302,446	79,216	783,760	24,300
31	246	**Oji Paper[9]**	Japan	Paper and wood products	2,133,664	2,153,829	18,272	338,162	9,045
32	222	**Mobil Oil**	Britain	Petroleum	2,132,803[12]	1,165,883	(47,747)	332,157	2,535
33	254	**MBB (Messerschmitt-Bölkow-Blohm)**	Germany	Aerospace	2,131,728[6]	N.A.	N.A.	N.A.	39,600[6]
34	249	**Johnson Matthey[9]**	Britain	Metal manufacturing; chemicals	2,109,298	3,066,345	76,904	395,115	9,169
35	263	**British Shipbuilders[5,9]**	Britain	Shipbuilding, transportation equipment	2,104,122	1,237,930	(75,460)	302,694	69,700
36	237	**Hyosung Group**	South Korea	Textiles; industrial equipment	2,100,303	1,745,191	1,230	291,655	23,740
37	272	**Toyobo[32]**	Japan	Textiles; chemicals	2,087,640	1,737,945	13,034	220,698	17,425
38	244	**Takeda Chemical[9]**	Japan	Pharmaceuticals	2,081,559	2,283,502	103,664	1,058,366	12,589
39	228	**United Biscuits (Holdings)**	Britain	Food products	2,079,689	1,174,278	103,366	571,819	40,000
40	274	**Chrysler Canada**	Canada	Motor vehicles	2,069,273	640,531	(45,693)	(44,723)	11,000
241	203	**Sulzer Brothers**	Switzerland	Industrial equipment	2,064,949	3,640,354	16,352	1,739,920	34,326
242	189	**Mitsui Toatsu Chemicals[9]**	Japan	Chemicals	2,051,072	2,048,459	(37,057)	114,400	7,546
243	194	**Oerlikon-Bührle**	Switzerland	Industrial and military equip.; leather products	2,038,992	3,909,535	16,045	1,820,680	35,209
244	243	**Nippon Suisan[9]**	Japan	Food products	2,034,375	1,023,123	14,900	186,835	6,467
245	210	**IBM United Kingdom Holdings**	Britain	Office equipment (including computers)	2,030,844[13]	N.A.	166,197	N.A.	15,000
246	248	**Kirin Brewery[11]**	Japan	Beverages	2,013,860	2,211,619	84,572	744,720	15,253
247	279	**Teijin[9]**	Japan	Chemicals	2,007,261	2,328,352	31,143	480,682	10,712
248	241	**Hiram Walker Resources[10]**	Canada	Beverages	2,005,138	4,075,104	208,938	1,509,465	11,430
249	259	**Toyo Seikan[9]**	Japan	Metal products	2,002,913	1,498,686	17,316	411,501	11,652
250	286	**Plessey[9]**	Britain	Electronics, appliances	1,975,944	1,437,078	122,555	664,897	47,339

[31] Figures are for fiscal year ending October 20, 1981

[32] Figures are for fiscal year ending April 30, 1981

[33] Figures do not include those for Korea Oil (1981 rank: 129), acquired on November 28, 1980

THE 500 LARGEST INDUSTRIALS OUTSIDE THE U.S.

RANK '81	RANK '80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCK-HOLDERS' EQUITY ($000)	EMPLOYEES
251	322	Sunkyong[33]	South Korea	Chemicals; textiles	1,941,223	1,145,890	7,982	139,721	15,728
252	281	Ajinomoto[9]	Japan	Food products	1,940,543	1,607,505	64,264	598,686	9,718
253	230	Babcock International	Britain	Industrial equipment	1,937,212	1,118,243	10,154	354,759	33,998
254	255	Toppan Printing[10]	Japan	Publishing, printing	1,932,979[12]	1,125,095[12]	63,496[12]	515,680[12]	8,200[12]
255	211	Showa Denko	Japan	Chemicals	1,908,488	2,384,669	(5,474)	234,994	5,953
256	257	Moore	Canada	Paper products, printing	1,879,063	1,088,314	115,402	685,461	27,703
257	247	Mobil Oil Française	France	Petroleum	1,877,297[12]	1,178,098[12]	(76)[12]	550,592[12]	2,436[12]
258	307	Brooke Bond Group[7,34]	Britain	Food products, beverages	1,876,405	1,106,185	45,505	526,944	70,000
259	324	Mitsui Mining[9]	Japan	Mining—coal	1,874,335	1,192,459	7,674	48,298	1,984
260	441	Dome Petroleum	Canada	Petroleum	1,867,585	8,605,526	166,087	1,137,659	9,500
261	150	Inco	Canada	Mining—nickel; metal products	1,855,923	3,774,008	(469,518)	1,632,945	31,768
262	303	Nissan Shatai[9]	Japan	Motor vehicles	1,854,433[12]	631,864[12]	19,378[12]	181,694[12]	6,877[12]
263	●	Chevron Oil Italiana	Italy	Petroleum	1,849,011[13]	304,184	(3,159)	21,519	898
264	224	MacMillan Bloedel	Canada	Paper, wood prod., bldg. materials	1,843,285	1,831,025	2,759	812,989	22,049
265	300	Hanson Trust[10]	Britain	Food products	1,842,419	1,065,573	73,835	297,675	39,000
266	336	Pilkington Brothers[9]	Britain	Glass	1,840,939	3,130,635	84,934	1,643,343	40,300
267	450	Empresa Colombiana de Petróleos[5]	Colombia	Petroleum	1,840,182	1,266,156	9,764	N.A.	10,051
268	215	Henkel	Germany	Chemicals	1,839,743	1,271,151	37,726	510,398	17,736
269	321	Nippon Light Metal[9]	Japan	Metal refining—aluminum; metal prod.	1,837,161	2,101,851	28,556	118,714	10,788
270	209	KHD (Klöckner-Humboldt-Deutz)	Germany	Industrial and farm equipment	1,833,655	1,489,639	16,898	314,254	25,496
271	260	Mitsubishi Petrochemical	Japan	Chemicals	1,822,521	1,999,334	(10,847)	175	3,782
272	314	Fuji Electric[9]	Japan	Electronics, appliances	1,821,158	1,823,458	23,548	206,100	16,970
273	240	Unión Explosivos Río Tinto	Spain	Petroleum; chemicals	1,820,179	1,901,334	1,237	554,609	9,765
274	250	PETRONOR	Spain	Petroleum	1,814,252	727,856	17,265	135,960	580
275	277	Mitsubishi Metal[9]	Japan	Metal refining—copper	1,813,360	1,698,713	9,637	122,191	5,000
276	245	Stelco	Canada	Metal refining—steel	1,813,341	2,452,678	69,106	1,303,826	26,263
277	202	Alfa Romeo[5]	Italy	Motor vehicles and parts	1,810,527	2,132,004	(103,685)	715,512	45,286
278	293	Hino Motors[9]	Japan	Motor vehicles	1,799,002[12]	1,076,885[12]	21,254[12]	259,941[12]	8,296[12]
279	226	L'Oréal	France	Soaps, cosmetics	1,792,578[6]	1,293,376[6]	95,648[6]	475,758[6]	23,727[6]
280	235	Genstar	Canada	Building materials	1,790,107	2,409,849	91,370	815,805	20,225
281	296	Seagram[29]	Canada	Beverages	1,789,735	5,980,539	1,559,613	2,797,708	16,000
282	238	Preussag	Germany	Metal refin.—nonfer.; mining—coal	1,788,824[6]	1,323,262[6]	40,896[6]	230,274[6]	16,990[6]
283	291	Dainippon Ink & Chemicals[9]	Japan	Chemicals	1,783,218	1,660,864	14,544	279,155	9,331
284	373	Hitachi Zosen[9,35]	Japan	Shipbuilding; industrial equipment	1,777,199	3,447,863	16,715	286,922	21,076
285	242	Sandvik Group	Sweden	Metal refin.—steel, cemented carbide	1,761,628[6]	2,177,239[6]	10,926[6]	328,234[6]	32,820[6]
286	299	Unitika[9]	Japan	Textiles	1,751,987	1,886,920	(4,486)	118,652	8,437
287	311	Daido Steel[7]	Japan	Metal refining—steel	1,750,156	1,356,019	35,966	187,819	10,342
288	284	Formosa Plastics Group	Taiwan	Chemicals	1,747,691	1,810,498	N.A.	661,493	33,583
289	204	CODELCO-CHILE[5]	Chile	Mining—copper	1,741,150	2,517,067	97,255	1,403,244	29,308
290	331	Daihatsu Motor[7]	Japan	Motor vehicles and parts	1,739,578[12]	857,169[12]	24,335[12]	279,715[12]	9,955[12]
291	223	Gallaher[36]	Britain	Tobacco	1,739,124	1,423,241	141,452	560,521	28,263
292	309	Jujo Paper[9]	Japan	Paper and wood products	1,730,855	1,776,186	18,471	176,637	7,370
293	273	Union Laitière Normande	France	Food products	1,717,825[6]	549,243[6]	2,638[6]	45,567[6]	5,500[6]
294	285	Vale do Rio Doce[5]	Brazil	Mining—iron	1,710,536	2,898,871	251,537	1,426,537	28,647
295	298	Nisshin Steel[9]	Japan	Metal refining—steel; metal prod.	1,710,384	2,076,716	48,510	379,904	10,529
296	262	Schering	Germany	Pharmaceuticals, chemicals	1,700,238	1,523,170	44,242	427,068	21,763
297	305	Distillers[9]	Britain	Beverages	1,697,276	2,759,370	288,495	2,080,020	21,000
298	252	Standard Elektrik Lorenz	Germany	Electronics, appliances	1,696,903[12]	944,210	11,387	273,410	33,012
299	295	AECI	South Africa	Chemicals	1,684,761	1,227,678	181,568	610,865	28,900
300	278	Reckitt & Colman	Britain	Food prod., bev., household cleaners	1,676,520	893,845	78,457	405,271	37,000

N.A. Not available

●Not on last year's list

[34] Name changed from Brooke Bond Liebig on January 18, 1982

[35] Name changed from Hitachi Shipbuilding & Engineering on July 1, 1982

[36] Name changed from Gallaher Group on January 2, 1981

RANK 1	'80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCK-HOLDERS' EQUITY ($000)	EMPLOYEES
1	327	**Nippon Gakki**[32]	Japan	Musical instruments, sporting goods	1,667,016	1,216,788	48,089	443,476	18,980
2	310	**Arla**[7,37]	Sweden	Food products	1,651,806	448,690	6,192	83,740	8,367
3	●	**Fletcher Challenge**[7]	New Zealand	Bldg. materials; paper and wood prod.	1,641,212	1,115,273	76,041	438,339	19,002
4	334	**Glaxo Holdings**[7]	Britain	Pharmaceuticals	1,626,285	1,324,407	138,638	737,341	28,218
5	338	**KUKjE**	South Korea	Rubber products; metal refining-steel	1,623,271	1,242,097	5,946	91,757	43,600
6	292	**Coats Patons**	Britain	Textiles	1,622,243	1,230,579	71,748	622,950	49,000
7	340	**Honshu Paper**[9]	Japan	Paper and wood products	1,619,045	1,940,747	2,249	101,630	6,701
8	349	**Sasol**[7]	South Africa	Chemicals; mining—coal	1,615,446	1,414,102	213,795	856,653	14,810
9	378	**Valores Industriales**	Mexico	Beverages; food products; packaging	1,613,485	1,987,227	84,968	802,501	54,490
0	347	**Northern Foods**[10]	Britain	Food products	1,600,024	621,532	54,816	340,233	18,983
1	375	**Korea Explosives Group**	South Korea	Petroleum; chemicals	1,589,864	1,367,836	11,701	184,944	14,411
2	437	**Chiyoda Chemical Eng. & Const.**[10]	Japan	Industrial equipment	1,588,425	1,364,962	15,061	183,885	3,764
3	270	**Empresa Nacional del Petróleo**[5]	Chile	Petroleum	1,581,708	1,633,597	61,366	1,022,044	3,776
4	265	**Entreprise Minière et Chimique**[5]	France	Mining—potash; chemicals	1,577,437[6]	1,146,481[6]	(51,936)[6]	271,120[6]	12,309[6]
5	275	**RMC Group**[38]	Britain	Building materials	1,576,439	882,438	43,904	303,169	15,120
6	330	**Sekisui Chemical**[9]	Japan	Chemicals; building materials	1,550,089	1,509,859	12,590	208,267	6,200
7	261	**Vauxhall Motors**	Britain	Motor vehicles	1,543,905	535,409	(116,332)	82,199	23,770
8	287	**ICL**[10]	Britain	Office equipment (includes computers)	1,530,721	914,482	(286,512)	129,095	25,564
9	356	**Nisshin Flour Milling**[9]	Japan	Food products	1,524,401	619,285	26,371	210,542	3,665
0	313	**Blue Circle Industries**	Britain	Building materials	1,520,498	2,359,280	95,056	1,603,430	N.A.
1	308	**Holderbank Financière Glaris**	Switzerland	Building materials	1,501,484[6]	3,066,614[6]	110,783[6]	822,815[6]	20,532[6]
2	442	**Onoda Cement**[9]	Japan	Building materials	1,496,552	1,872,309	16,932	193,452	6,500
3	280	**Oljekonsumenternas Förbund**	Sweden	Petroleum	1,495,298	917,963	21,712	79,199	5,794
4	332	**Shiseido**[19]	Japan	Soaps, cosmetics	1,493,291	1,232,530	52,704	661,566	19,381
5	316	**Atlas Copco**	Sweden	Industrial equipment	1,487,571[6]	1,289,203[6]	50,954[6]	331,641[6]	19,538[6]
6	294	**Svenska Cellulosa**	Sweden	Paper and wood products	1,485,564	1,730,862	45,590	313,936	16,015
7	354	**Whitbread**[15]	Britain	Beverages	1,477,136	2,377,318	140,248	1,697,860	40,217
8	348	**Dofasco**	Canada	Metal refining—steel	1,474,438	1,729,378	141,207	907,631	13,700
9	328	**Domtar**	Canada	Paper and wood prod.; bldg. materials	1,472,132	1,097,462	53,018	533,928	17,409
0	384	**Abitibi-Price**	Canada	Paper and wood products	1,470,998	1,379,555	99,803	618,665	18,000
1	283	**Béghin-Say**	France	Food products; paper products	1,470,186[12]	1,671,203[12]	12,313[12]	348,548[12]	8,391[12]
2	306	**Grundig**[9,16]	Germany	Electronics, appliances	1,467,015	1,618,103	(82,549)	201,178	30,767
3	326	**Northern Engineering Industries**	Britain	Industrial equipment; electronics	1,461,316	1,141,817	39,415	356,269	34,868
4	302	**Alfa-Laval**	Sweden	Industrial and farm equipment	1,458,747	1,469,258	20,958	261,221	18,525
5	364	**Pioneer Electronic**[10,18]	Japan	Electronics, appliances	1,456,972	1,115,970	66,075	635,144	10,865
6	282	**Hachette**	France	Publishing, printing	1,455,051[6]	706,871[6]	1,873[6]	156,301[6]	12,800[6]
7	269	**SSAB (Svenskt Stål)**[5]	Sweden	Metal refining—steel	1,443,510	1,646,800	(143,227)	604,957	16,927
8	362	**Daishowa Paper**[9]	Japan	Paper and wood products	1,436,252	2,718,601	4,056	111,751	5,371
9	169	**De Beers Consolidated Mines**	South Africa	Mining—diamonds	1,434,402	4,778,187	721,565	3,720,808	19,623
0	271	**Continental Gummi-Werke**	Germany	Rubber products	1,434,037	889,036	(7,781)	178,251	28,640
1	351	**Meiji Milk Products**[9]	Japan	Food products	1,428,721	594,140	7,267	117,541	6,393
2	323	**Mobil Oil Italiana**	Italy	Petroleum	1,428,215	637,325	(4,799)	29,400	1,706
3	335	**S. Pearson & Son**	Britain	Publishing; ceramics	1,423,204	1,225,167	74,707	516,242	34,223
4	333	**Mitsui Petrochemical**[9]	Japan	Chemicals	1,420,377	1,561,255	10,219	183,505	5,334
5	361	**Canadian General Electric**	Canada	Electronics, appliances	1,418,208[13]	875,241	42,644	367,187	19,987
6	454	**Fuji Kosan**[9]	Japan	Petroleum	1,417,589[12]	1,047,097[12]	872[12]	43,757[12]	950[12]
7	406	**Sumitomo Heavy Industries**[9]	Japan	Industrial equip.; shipbuilding	1,417,57[illegible]	2,150,565	12,608	113,435	9,744
8	444	**Ford Motor**	Mexico	Motor vehicles and parts	1,411,882[13]	717,559	42,928	213,569	8,931
9	320	**SWEDYARDS (Svenska Varv)**[5]	Sweden	Shipbuilding, transportation equipment	1,411,170	3,496,224	(56,913)	212,879	24,453
0	388	**Ricoh**[9]	Japan	Office equipment (includes computers)	1,402,831	1,188,237	75,135	469,713	16,700

ame changed from Mjölkcentralen Arla on June 30, 1981

ame changed from Ready Mixed Concrete on December 31, 1981

THE 500 LARGEST INDUSTRIALS OUTSIDE THE U.S.

RANK '81	RANK '80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCK-HOLDERS' EQUITY ($000)	EMPLOY
351	346	**Arthur Guinness[10]**	Britain	Beverages	1,402,641	1,134,628	14,422	437,228	21,86
352	358	**Sumitomo Metal Mining[9]**	Japan	Metal refining—nonferrous	1,399,546	1,236,162	13,403	147,954	4,63
353	339	**Mitsui Mining & Smelting[9]**	Japan	Metal refin.-nonfer.; fab. metal prod.	1,398,698	1,393,825	(1,824)	112,679	8,42
354	318	**Rowntree Mackintosh**	Britain	Food products	1,394,432	926,286	58,980	612,800	28,00
355	304	**Swedish Match**	Sweden	Paper, pulp, wood prod.; bldg. materials	1,393,927	1,037,344	6,754	205,283	22,75
356	427	**John Brown[9]**	Britain	Industrial equipment	1,362,618	842,592	45,642	240,137	N /
357	●	**CII-Honeywell Bull**	France	Office equipment (includes computers)	1,359,630	1,492,479	(83,132)	229,421	21,19
358	393	**General Motors-Holden's**	Australia	Motor vehicles and parts	1,354,633	874,200	7,013	N.A.	19,20
359	385	**Nippon Meat Packers[29]**	Japan	Food products	1,353,627	557,748	20,467	260,100	8,43
360	474	**Federale Volksbeleggings Beperk[9]**	South Africa	Food products; chemicals	1,339,609	895,893	49,775	223,275	28,34
361	343	**Chevron Oil Belgium**	Belgium	Petroleum	1,323,902[13]	403,374	(23,114)	246,262	74
362	253	**Snia Viscosa**	Italy	Chemicals; textiles	1,323,770	1,657,938	1,215	115,060	21,71
363	433	**Chrysler de Mexico**	Mexico	Motor vehicles and parts	1,322,998	494,472	21,213	152,132	9,81
364	376	**Nokia**	Finland	Metal prod.; rubber and paper prod.; elect.	1,318,069	1,297,855	13,114	207,467	23,40
365	415	**Kuraray[9]**	Japan	Chemicals	1,312,722	1,378,913	9,305	84,326	8,50
366	396	**Meiji Seika[9]**	Japan	Food prod.; beverages; pharmaceuticals	1,312,080	757,055	12,289	250,222	5,75
367	312	**Jacobs**	Switzerland	Food products	1,310,813	469,448	35,875	158,972	3,80
368	290	**Valeo**	France	Motor-vehicle parts	1,304,784[6]	1,073,358[6]	(26,241)[6]	206,889[6]	27,00
369	374	**Rijn-Schelde-Verolme**	Netherlands	Shipbuilding, transportation equip.	1,302,491	2,176,338	(3,392)	159,134	25,97
370	●	**Dunlop Olympic[7,39]**	Australia	Rubber products—textiles	1,294,092	739,607	40,394	337,563	17,78
371	382	**BTR**	Britain	Industrial equipment	1,292,103	1,181,007	107,529	499,024	26,00
372	422	**Thyssen-Bornemisza**	Neth.-Antilles	Metal prod.; packaging; farm equip.	1,277,802	1,156,899	109,271	443,582	17,60
373	258	**Sanyo-Kokusaku Pulp[9]**	Japan	Paper and wood products	1,273,836[12]	1,422,727[12]	4,495[12]	119,589[12]	5,08
374	288	**ENSIDESA[5]**	Spain	Metal refining—steel	1,264,056	3,196,394	(227,068)	397,441	23,90
375	315	**Turner & Newall**	Britain	Chemicals; motor-vehicle parts	1,262,082	1,279,603	(52,899)	587,331	45,00
376	401	**Husky Oil**	Canada	Petroleum	1,259,286	1,749,006	23,706	445,862	3,16
377	383	**Nichiro Gyogyo[19]**	Japan	Food products	1,254,990	777,546	13,598	46,443	4,01
378	345	**Matra**	France	Aerospace; motor-vehicle parts	1,253,120[6]	1,798,985[6]	29,549[6]	202,239[6]	31,00
379	325	**Zanussi Group**	Italy	Electronics, appliances	1,253,120[12]	1,166,829[12]	3,209[12]	124,754[12]	32,60
380	404	**Nissan Diesel Motor[9]**	Japan	Motor vehicles	1,252,019[12]	1,001,637[12]	12,959[12]	162,440[12]	6,70
381	●	**PETROPERU[5,40]**	Peru	Petroleum	1,250,549	1,424,337	1,731	301,355	8,68
382	●	**Racal Electronics[9]**	Britain	Electronics, appliances	1,248,858	1,214,170	97,396	474,167	18,00
383	428	**Amatil[17]**	Australia	Tobacco; beverages; food products	1,245,374	721,243	34,714	338,645	12,71
384	473	**Mitsui Engineering & Shipbldg.[9]**	Japan	Fab. metal prod.; shipbldg.; trans. equip.	1,234,157[12]	2,033,044[12]	42,652[12]	336,246[12]	11,60
385	381	**Consolidated-Bathurst**	Canada	Paper and wood products	1,233,977	1,207,695	93,482	459,937	16,70
386	455	**TDK Electronics[19]**	Japan	Electronics, appliances	1,230,767	1,113,258	125,409	614,581	12,13
387	371	**Anomina Petroli Italiana**	Italy	Petroleum	1,225,004	235,824	(576)	44,717	1,03
388	387	**Vickers**	Britain	Indus. equip.; motor vehl.; publ. and prntg.	1,223,370	1,018,780	11,958	405,214	27,66
389	421	**Hispanoil (Hispanica de Petróleos)[5]**	Spain	Petroleum	1,221,776	377,061	3,171	29,545	25
390	412	**Yoshida Kogyo[9]**	Japan	Building materials; metal products	1,217,338	1,770,846	56,443	350,947	13,26
391	400	**Morinaga Milk Industry[9]**	Japan	Food products; beverages	1,217,081[12]	560,775[12]	2,064[12]	73,846[12]	4,69
392	353	**Ford España**	Spain	Motor vehicles and parts	1,204,375[13]	1,222,400	70,682	377,370	9,73
393	419	**Molson[9]**	Canada	Beverages; chemicals; bldg. materials	1,198,239	727,344	32,176	247,131	13,17
394	370	**SNECMA**	France	Aerospace	1,188,757	2,206,281	(24,743)	247,820	20,58
395	410	**Kao Soap[9]**	Japan	Soaps, cosmetics	1,184,245	988,726	13,601	306,026	4,12
396	403	**Tokyo Sanyo Electric[19]**	Japan	Electronics, appliances	1,182,491[12]	1,056,548[12]	29,939[12]	429,857[12]	9,43
397	443	**Konishiroku Photo Industry[41]**	Japan	Photographic equipment	1,181,230	1,109,532	34,447	324,914	8,23
398	438	**Nihon Cement[31]**	Japan	Building materials	1,181,138	1,461,098	10,170	187,584	5,91
399	366	**Rheinische Braunkohlenwerke**	Germany	Mining—coal	1,178,182[12]	2,213,481[12]	11,103[12]	329,761[12]	16,98
400	352	**Heineken**	Netherlands	Beverages	1,177,019[6]	1,365,484[6]	48,455[6]	645,299[6]	21,14

N.A. Not available

●Not on last year's list

*Fortune estimate

[39] Name changed from Dunlop Australia on December 1, 1980

[40] Name changed from Petróleos del Peru on December 24, 1981

[41] Figures are for fiscal year ending April 20, 1981

RANK '81	'80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCKHOLDERS' EQUITY ($000)	EMPLOYEES
401	●	**Motor Oil (Hellas) Corinth Refin.**	Greece	Petroleum	1,172,338	460,691	4,127	6,967	1,021
402	342	Bosch-Siemens Hausgeräte	Germany	Electronics, appliances	1,172,193[12]	462,563[12]	4,885[12]	138,741[12]	13,100[12]
403	391	**Petroliber[6]**	Spain	Petroleum	1,169,602	577,908	8,040	91,241	807
404	289	SEAT[5]	Spain	Motor vehicles and parts	1,161,643	2,108,984	(219,439)	335,958	25,775
405	397	**Yokohama Rubber**	Japan	Rubber products	1,159,135	932,873	(5,974)	94,067	11,412
406	430	Australian Consolidated Industries[9]	Australia	Glass, packaging & building materials	1,157,740	1,574,321	72,601	711,747	21,849
407	301	**ARBED**	Luxembourg	Metal refining—steel	1,155,460[12]	2,301,415[12]	(85,558)[12]	531,558[12]	19,070[12]
408	405	Kyowa Hakko Kogyo	Japan	Chemicals; pharmaceuticals	1,154,089	1,047,901	16,949	236,477	6,589
409	363	**Standard Telephones & Cables**	Britain	Electronics	1,150,297	761,004	73,907	355,483	25,009
410	350	Boliden	Sweden	Mining—nonfer., met. refin., chemicals	1,146,886	834,211	16,826	136,011	9,609
411	329	**Norddeutsche Affinerie[10,16]**	Germany	Metal refining—nonferrous	1,146,228[12]	270,546[12]	7,259[12]	81,291[12]	3,325[12]
412	359	Koninklijke Wessanen	Netherlands	Food products	1,135,167[6]	349,761[6]	10,142[6]	124,724[6]	3,507[6]
413	344	**Thomas Borthwick & Sons[43]**	Britain	Food products	1,131,179	283,938	(4,318)	58,794	11,000
414	357	Rütgerswerke	Germany	Chemicals; building materials	1,130,306	562,148	8,803	142,774	11,371
415	462	**Toyoda Automatic Loom Works[9]**	Japan	Motor vehicles; industrial equip.	1,119,606[12]	704,172[12]	45,155[12]	372,561[12]	5,624[12]
416	365	PWA	Germany	Paper and wood products	1,114,331[6]	726,064[6]	(3,562)[6]	106,530[6]	10,986[6]
417	369	**Tiger Oats & National Milling**	South Africa	Food products	1,110,412[*]	N.A.	49,599[*]	N.A.	21,568
418	414	Butano[5]	Spain	Petroleum	1,108,603	489,069	10,057	181,947	3,563
419	431	**Lesieur**	France	Food products; soaps	1,105,741[6]	529,305[6]	22,723[6]	151,467[6]	6,561[6]
420	377	Linde	Germany	Industrial equipment	1,103,578[6]	1,275,488[6]	18,910[6]	236,957[6]	15,534[6]
421	436	**John Labatt[32]**	Canada	Food products; beverages	1,101,992	604,379	35,147	236,238	10,400
422	435	Wellcome Foundation[26]	Britain	Pharmaceuticals	1,101,410	1,013,274	72,870	555,714	18,501
423	456	**Mitsubishi Rayon[9]**	Japan	Textiles; chemicals	1,097,310	1,017,593	14,747	125,194	3,547
424	446	Esselte[9]	Sweden	Office equip.; publishing, printing	1,095,865	892,149	21,382	149,762	15,248
425	409	**Kugelfischer Georg Schäfer**	Germany	Metal products	1,092,489	1,081,892	14,360	104,154	29,826
426	379	Douwe Egberts[7]	Netherlands	Food products	1,087,969	567,749	57,322	280,546	6,643
427	439	**Ito Ham Provisions[15]**	Japan	Food products	1,086,170	556,221	26,564	275,577	5,184
428	372	DRG[43]	Britain	Paper and wood products	1,084,130	642,483	5,270	188,245	22,142
429	420	**FMC[32]**	Britain	Food products	1,079,311	146,053	(2,673)	41,395	5,700
430	319	IMI	Britain	Metal prod.; metal mfg.—nonferrous	1,079,201	908,712	31,016	490,535	22,840
431	341	**Stahlwerke Röchling-Burbach**	Germany	Metal refining—steel	1,075,554[12]	1,637,998[12]	38,953[12]	219,345[12]	21,261[12]
432	425	Denki Kagaku Kogyo[9]	Japan	Chemicals	1,074,959	1,226,011	3,045	176,595	3,947
433	355	**W.C. Heraeus**	Germany	Metal refining	1,068,635	321,054	11,585	96,813	6,216
434	398	Ford Brasil[22]	Brazil	Motor vehicles and parts	1,067,383[13]	581,173	62,615	172,017	19,601
435	471	**Aisin Seiki[9]**	Japan	Motor-vehicle parts	1,060,929[12]	609,895[12]	33,528[12]	35,184[12]	7,500[12]
436	467	Rengo[9]	Japan	Paper and wood products	1,059,800	595,658	18,277	101,340	4,443
437	360	**Magirus-Deutz**	Germany	Motor vehicles	1,058,823[12]	764,022[12]	(21,243)[12]	116,176[12]	11,483[12]
438	487	Altos Hornos de Mexico[5,P]	Mexico	Metal refining—steel	1,053,493	3,290,049	71,877	1,788,615	30,068
439	●	**Citizen Watch[9]**	Japan	Watches, clocks	1,051,057	936,922	40,162	254,946	9,686
440	434	British Sugar[10]	Britain	Food products	1,050,904	728,708	66,389	552,044	5,981
441	492	**Scottish & Newcastle Breweries[32]**	Britain	Beverages	1,050,688	1,100,345	60,059	560,121	26,920
442	367	Freudenberg	Germany	Chemicals; textiles	1,047,655[6]	N.A.	N.A.	N.A.	22,700[6]
443	399	**Enso-Gutzeit[6]**	Finland	Paper and wood products	1,047,145	1,842,070	7,861	463,080	16,999
444	460	Mitsubishi Gas Chemical[9]	Japan	Chemicals	1,044,499	1,065,125	30,848	254,701	4,610
445	445	**Lion**	Japan	Soaps, cosmetics; chemicals	1,039,843	602,024	9,591	196,851	4,133
446	402	AGA	Sweden	Chemicals, gases; industrial equip.	1,038,105	1,048,200	5,999	204,500	14,365
447	●	**Dalmine[5]**	Italy	Metal products	1,032,595	1,009,736	101,189	148,410	12,878
448	486	Nippon Seiko[32]	Japan	Indus. equip.; motor-vehicle parts	1,031,084	1,074,549	60,236	320,331	8,700
449	418	**Suncor**	Canada	Petroleum	1,027,604	1,485,886	41,813	401,270	4,933
450	386	Boehringer Ingelheim	Germany	Pharmaceuticals, chemicals	1,018,788[6]	995,537[6]	26,647[6]	396,785[6]	14,822[6]

[P] All figures are preliminary

[12] Figures are for fiscal year ending September 30, 1981

[13] Name changed from Dickinson Robinson Group on June 8, 1981

THE 500 LARGEST INDUSTRIALS OUTSIDE THE U.S.

RANK '81	RANK '80	COMPANY	COUNTRY	INDUSTRY	SALES ($000)	ASSETS ($000)	NET INCOME ($000)	STOCKHOLDERS' EQUITY ($000)	EMPLOYEES
451	380	**Zahnradfabrik Friedrichshafen**	Germany	Motor-vehicle parts; indus. equip.	1,018,344	831,104	17,406	129,839	19,269
452	413	**Steyr-Daimler-Puch**	Austria	Motor vehicles	1,016,222[12]	1,015,431[12]	8,196[12]	212,066[12]	17,579[12]
453	466	**Kanto Auto Works**[9]	Japan	Motor vehicles	998,295[12]	260,198[12]	6,485[12]	65,841[12]	5,632[12]
454	451	**Toyo Soda Manufacturing**[9]	Japan	Chemicals	997,421	1,336,674	6,426	178,217	6,000
455	●	**Oki Electric Industry**[9]	Japan	Electronics, appliances	985,525	1,074,476	24,186	163,691	14,769
456	390	**Dollfus-Mieg**	France	Textiles	983,177[6]	685,804[6]	(13,563)[6]	97,538[6]	19,123[6]
457	476	**Valmet**[5]	Finland	Industrial, farm and trans. equip.	983,097	1,405,209	(38,937)	101,898	16,084
458	389	**Reemtsma Cigarettenfabriken**	Germany	Tobacco; beverages	978,202	958,368	5,995	229,224	11,426
459	497	**Niigata Engineering**[9]	Japan	Industrial equipment; shipbuilding	978,156	962,834	14,715	210,698	6,594
460	448	**Albright & Wilson**	Britain	Chemicals	977,861	585,601	30,153	305,456	8,855
461	368	**Delta Group**	Britain	Electronics; metal products	976,710	706,003	689	305,940	21,875
462	395	**Usines Chausson**	France	Motor vehicles and parts	963,014[6]	497,586[6]	(36,609)[6]	43,905[6]	15,000[6]
463	●	**NTN Toyo Bearing**[44]	Japan	Motor-vehicle parts	954,624	883,224	40,457	162,019	6,867
464	490	**Du Pont Canada**	Canada	Chemicals; textiles	950,267[12]	526,334	(3,956)	220,358	6,000
465	432	**AE**[10,45]	Britain	Motor-vehicle parts	949,516	582,730	(3,875)	258,550	23,222
466	423	**Georg Fischer**	Switzerland	Industrial equipment; steel castings	948,927	933,438	(4,088)	282,996	17,709
467	429	**Stora Kopparbergs Bergslags**	Sweden	Paper and wood products	946,607	1,327,400	29,400	269,291	9,929
468	●	**Toyota Auto Body**[9]	Japan	Motor vehicles and parts	937,771[12]	304,340[12]	7,680[12]	89,790[12]	5,940[12]
469	392	**Axel Springer**[16]	Germany	Publishing, printing	929,916	339,062	3,553	80,290	11,607
470	426	**General Motors do Brasil**	Brazil	Motor vehicles and parts	926,078[13]	1,081,428	(3,475)	241,067	17,603
471	407	**Carl-Zeiss-Stiftung**[10]	Germany	Measuring and scientific equip.	923,738	798,032	1,184	104,151	24,844
472	417	**SEITA**[5]	France	Tobacco	923,500[*,12]	1,088,764[12]	(22,047)[*,12]	397,414[12]	8,760[12]
473	479	**Redland**[9]	Britain	Building materials	912,584	476,572	45,836	302,191	12,780
474	●	**Dillinger Hüttenwerke**	Germany	Metal manuf.—steel	909,934	578,886	750	191,459	N.A.
475	447	**Dansk Esso**	Denmark	Petroleum	891,652	320,596	5,663	82,960	1,069
476	440	**USIMINAS**[5]	Brazil	Metal refining—steel	888,795	2,207,559	845	400,517	17,237
477	●	**C.&J. Clark**	Britain	Leather products	885,792*	N.A.	20,977*	N.A.	2,400
478	496	**Tootal Group**[20,46]	Britain	Textiles	881,284	634,276	(15,537)	296,733	23,384
479	468	**Rauma-Repola**	Finland	Paper, pulp and wood prod.; metal prod.	880,530[12]	1,417,922[12]	12,983[12]	186,233[12]	17,896[12]
480	●	**Showa Sangyo**[19]	Japan	Food products	880,515	494,015	8,236	123,806	1,989
481	498	**Gulf Oil-Great Britain**	Britain	Petroleum	878,309[*,13]	N.A.	(62,020)	N.A.	939
482	●	**Siderúrgica Paulista**	Brazil	Metal mfg.—steel	866,389	3,151,593	(22,803)	969,241	15,535
483	●	**Elkem**[47]	Norway	Metal manufacturing	865,106	891,775	(20,321)	140,676	13,244
484	416	**Eschweiler Bergwerks-Verein**	Germany	Mining—coal	863,023	753,985	48	95,039	19,530
485	485	**Nixdorf Computer**	Germany	Office equipment (includes computers)	858,755[6]	1,030,746[6]	17,785[6]	236,982[6]	14,760[6]
486	●	**Topy Industries**[9]	Japan	Motor refining—steel; motor-veh. parts	856,069	589,585	3,675	49,376	4,056
487	408	**Carnaud**	France	Metal products	855,378[6]	643,322[6]	(11,663)[6]	116,977[6]	12,499[6]
488	●	**Sumitomo Light Metal Industries**[9]	Japan	Metal mfg.—aluminum, copper	847,011[12]	972,058[12]	2,805[12]	75,030[12]	2,280[12]
489	●	**BPB Industries**[9]	Britain	Building materials; paper, pulp	845,526	662,606	70,615	394,929	11,700
490	394	**Siderúrgica Nacional**	Brazil	Metal refining—steel	841,944[12]	3,603,669[12]	(11,455)[12]	939,472[12]	23,000[12]
491	●	**Incentive**	Sweden	Measur. & scientific equip.; indust. equip.	840,587	705,176	11,005	82,550	12,424
492	475	**Cehave**[7]	Netherlands	Food products	838,558	240,190	3,354	97,798	2,303
493	453	**M.I.M. Holdings**[7]	Australia	Mining—nonferrous	837,997	1,329,442	123,627	697,360	7,781
494	●	**Coalite Group**[9]	Britain	Chemicals	837,985	348,317	46,033	215,175	N.A.
495	469	**A. Ahlström**	Finland	Paper and wood products	835,276	1,066,264	8,025	216,511	13,577
496	464	**Mo och Domsjö**	Sweden	Paper and wood products	833,118	1,039,840	338	228,562	7,494
497	●	**Aichi Machine Industry**[9]	Japan	Motor vehicles and parts	832,990[12]	359,318[12]	10,703[12]	68,717[12]	4,738[12]
498	●	**Shionogi**[9]	Japan	Pharmaceuticals	827,174	776,709	38,549	410,895	6,718
499	●	**Smiths Industries**[20]	Britain	Aerospace; mot.-veh. parts; indus. equip.	826,122	483,596	36,573	256,244	17,541
500	493	**Chloride Group**[9]	Britain	Motor-vehicle parts	824,304	624,877	(52,645)	210,748	20,197
		TOTALS			1,856,195,921	1,583,720,632	31,566,274	447,394,797	18,012,935

N.A. Not available

●Not on last year's list

*Fortune estimate

[44] Figures are for fiscal year ending March 20, 1981

[45] Name changed from Associated Engineering on May 22, 1981

[46] Name changed from Tootal on March 22, 1982

[47] Name changed from ES-Group on September 1, 1980

PERSPECTIVES ON THE 500

CHANGES IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Texaco (Britain)	110	481.4%
Kuwait Petroleum	6	450.3
Petro-Canada	224	260.3
Racal Electronics	382	217.9
Empresa Colombiana de Petróleos	267	193.3
Dome Petroleum	260	191.0
Volvo	35	169.5
Dunlop Olympic	370	160.4
Chiyoda Chemical Eng. & Construction	312	159.9
Onoda Cement	322	153.2

THE TEN BIGGEST DECREASES

Dunlop Holdings	163	60.7%
De Beers Consolidated Mines	339	47.9
Inco	261	38.9
Métallurgie Hoboken-Overpelt	218	31.7
Sanyo-Kokusaku Pulp	373	29.3
SEAT	404	27.9
Snia Viscosa	362	27.5
IMI	430	26.2
ARBED	407	25.4
Siderúrgica Nacional	490	25.3

THE INDUSTRY MEDIANS

	INCREASES
Measuring and scientific equipment	21.8%
Shipbuilding, transportation equipment	18.6
Electronics, appliances	13.1
Beverages	12.7
Textiles	9.8
Pharmaceuticals	8.7
Petroleum	8.7
Motor vehicles and parts	7.5
Soaps, cosmetics	7.4
Industrial and farm equipment	6.0
Food products	5.6
Building materials	5.4
Publishing, printing	4.7
Rubber products	3.9
Chemicals	1.8
Metal products	1.7

	DECREASES
Mining	10.6%
Paper and wood products	6.1
Tobacco	3.5
Office equipment (includes computers)	1.5
Metal refining	1.1
Aerospace	1.0

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*

	SALES RANK	
Hitachi Zosen	284	4,505.4%
Ford España	392	1,125.9
Bowater	139	1,093.0
Seagram	281	1,078.2
Volvo	35	988.4
Kawasaki Heavy Industries	137	982.5
PETRONOR	274	953.9
Stahlwerke Röchling-Burback	431	895.5
Chinese Petroleum	74	720.6
Dalgety	83	634.7

THE TEN BIGGEST DECREASES*

Steel Authority of India	211	99.7%
Chemische Werke Hüls	209	99.2
Tabacalera	226	98.7
MacMillan Bloedel	264	97.1
Esso Nederland	194	97.0
Dillinger Hüttenwerk	474	96.5
Mo och Domsjö	496	95.7
Fuji Kosan	346	93.7
PETROPERU	381	92.7
VIAG	201	91.5

*Listings exclude money losers.

THE INDUSTRY MEDIANS

	INCREASES
Metal products	13.9%
Food products	13.4
Electronics, appliances	11.7
Beverages	11.6
Motor vehicles and parts	4.2
Pharmaceuticals	3.4
Measuring and scientific equipment	3.2

	DECREASES
Rubber products	100.0%
Textiles	55.6
Metal refining	46.1
Shipbuilding, transportation equipment	45.2
Mining	34.4
Chemicals	34.0
Aerospace	26.2
Petroleum	23.3
Office equipment (includes computers)	20.8
Publishing, printing	20.5
Building materials	16.7
Paper and wood products	15.5
Tobacco	13.1
Soaps, cosmetics	9.4
Industrial and farm equipment	6.7

ARRIVALS AND DEPARTURES

NEWCOMERS AND RETURNEES*

	1981 SALES RANK
Aichi Machine Industry	497
BPB Industries (1976: 472)	489
CII-Honeywell Bull (1979: 330)	357
Chevron Oil Italiana (1976: 368)	263
Citizen Watch (1979: 493)	439
Clark (C.&J.)	477
Coalite Group	494
Dalmine (1978: 465)	447
Dillinger Hüttenwerke (1979: 371)	474
Dunlop Olympic (1979: 489)	370
Elkem (1979: 494)	483
Fletcher Challenge	303
Incentive (1977: 492)	191
Motor Oil (Hellas) Corinth Refineries	401
NTN Toyo Bearing (1979: 495)	463
Oki Electric Industry (1979: 472)	455
Petro-Canada	224
PETROPERU	381
Racal Electronics	382
Shionogi (1979: 483)	498
Showa Sangyo (1979: 496)	480
Siderúrgica Paulista	482
Smiths Industries (1975: 485)	499
Sumitomo Light Metal Industries	488
Texico (Britain) (1978: 279)	110
Topy Industries	486
Toyota Auto Body (1979: 434)	468

*Figures in parentheses indicate year and sales rank the last time the company was listed.

DEPARTURES

	1980 SALES RANK
Bekaert Group	449
Bofors	463
Chemie Linz	484
Diehl	483
Esso Chimie	458
Euroc	482
Fichtel & Sachs	472
Fisons	457
Gecamines[1]	317
Générale Sucrière	470
Glynwed	499
Hainaut-Sambre[2]	337
Industrias Peñoles	452
Interfood	477
Kodak	491
Kodak-Pathé	495
Liebherr-Holding	489
MTU	488
Olida & Caby	500
Pernod Ricard	481
Schindler Holding	494
Sidmar	461
Smidth (F.L.)	411
Södra Skogsägarna	478
Svenska Fläktfabriken[2]	424
Tchibo Frisch-Röst-Kaffee	459
Uddeholm	480
VMF-Stork	465

[1] The company's results are not yet published.

[2] The company's figures are consolidated in another listed company.

THE MONEY LOSERS

	SALES RANK	LOSS ($000)
YPF (Yacimientos Petrolíferos)	99	3,820,963
British Steel*	54	2,386,576
Italsider*	135	1,510,775
BL*	78	1,007,315
Usinor*	104	777,271
Montedison*	45	550,910
Sacilor*	147	531,887
Inco	261	469,518
Cockerill Sambre*	122	464,989
Peugeot*	27	368,825
ICL	318	286,512
ESTEL*	79	280,763
Courtaulds	120	266,969
Adam Opel	105	263,282
Grupo Industrial Alfa	193	239,029
ENSIDESA*	374	227,068
SEAT*	404	219,439
Massey-Ferguson*	184	194,800
Salzgitter*	115	175,708
Statsföretag Group	160	169,011
SSAB (Svenskt Stål)*	337	143,227
National Coal Board	34	135,239
Renault	16	124,916
Maruzen Oil*	50	120,060
Vauxhall Motors*	317	116,332
Alfa Romeo*	277	103,685
Showa Oil	111	96,110
ARBED*	407	85,558
CII-Honeywell Bull	357	83,132
Dunlop Holdings	163	83,098
Grundig	332	82,549
Ford Motor of Canada*	72	82,501
Lucas Industries	182	77,915
Tube Investments*	219	76,815
British Shipbuilders*	235	75,460
Michelin	66	66,628
Schneider*	59	63,346
Gulf Oil Great Britain	481	62,020
Rhône-Poulenc*	58	61,995
SWEDYARDS (Svenska Varv)*	349	56,913
Turner & Newall*	375	52,899
Chloride Group	500	52,645
Entreprise Minière et Chimique	314	51,936
Charbonnages de France	112	49,318
Guest, Keen & Nettlefolds*	130	49,251
Mobil Oil (Britain)	232	47,747
Chrysler Canada*	240	45,693
Klöckner-Werke*	225	42,118
Valmet*	457	38,937
Mitsui Toatsu Chemicals	242	37,057
Usines Chausson*	462	36,609
Metal Box	195	35,726
Thyssen	29	32,341
Kanebo	213	27,200
ALUSUISSE (Swiss Aluminum)	136	26,725
Valeo	368	26,241
Burmah Oil	166	25,132
SNECMA	394	24,743
Chevron Oil Belgium	361	23,114
PETROGAL (Petróleos de Portugal)	187	22,912
Siderúrgica Paulista*	482	22,803
SEITA*	472	22,047
Magirus-Deutz*	437	21,243
Fried. Krupp	61	20,858
Elkem	483	20,321
Solvay	114	17,711
Korea Oil*	129	16,084
Tootal Group	478	15,537
Thomson-Brandt	43	13,625
Dollfus-Mieg*	456	13,563
Carnaud	487	11,663
Siderúrgica Nacional	490	11,455
Mitsubishi Petrochemical	271	10,847
VÖEST-Alpine*	117	9,356
General Motors of Canada	38	8,592
Continental Gummi-Werke	340	7,781
Rolls-Royce*	165	6,080
Yokohama Rubber	405	5,974
Showa Denko	255	5,474
Mobil Oil Italiana	342	4,799
Unitika*	286	4,486
Thomas Borthwick & Sons*	413	4,318
Georg Fischer	466	4,088
Du Pont Canada	464	3,956
AE*	465	3,875
PWA	416	3,562
General Motors do Brasil	470	3,475
Rijn-Schelde-Verolme*	369	3,392
Chevron Oil Italiana	263	3,159
FMC	429	2,673
Mitsui Mining & Smelting	353	1,824
Anomina Petroli Italiana	387	576
Mobil Oil Française	257	76

*Also lost money in 1980.

THE 500 BY COUNTRY

	RANK BREAKDOWN								
	1-100	101-200	201-300	301-400	401-500	Total	LARGEST COMPANY	($000)	RANK
Argentina	1	0	0	0	0	1	YPF (Yacimientos Petrolíferos Fiscales)	4,815,778	99
Australia	1	1	0	3	2	7	Broken Hill Proprietary	5,322,036	87
Austria	0	2	0	0	1	3	ÖMV (Österreichische Mineralölverwaltung)	4,271,013	113
Belgium	1	3	1	1	0	6	Petrofina	9,244,555	37
Brazil	1	0	1	0	5	7	Petrobrás (Petróleo Brasileiro)	18,946,056	10
Britain	15	23	18	17	19	92	British Petroleum	52,199,976	2
Britain-Netherlands	1	0	0	0	0	1	Unilever	24,095,898	4
Canada	5	5	13	7	3	33	Canadian Pacific	10,290,790	33
Chile	0	0	1	1	0	2	CODELCO-CHILE	1,741,150	289
Colombia	0	0	1	0	0	1	Empresa Colombiana de Petróleos	1,840,182	267
Denmark	0	0	0	0	1	1	Dansk Esso	891,652	475
Finland	0	1	0	1	4	6	Neste	3,785,781	128
France	12	8	6	7	5	38	Française des Pétroles	22,784,032	5
Germany	16	11	10	3	18	58	Volkswagenwerk	16,822,215	13
Greece	0	0	0	0	1	1	Motor Oil (Hellas) Corinth Refineries	1,172,338	401
India	1	0	1	0	0	2	Indian Oil	6,264,507	64
Israel	0	1	0	0	0	1	Koor Industries	2,800,000	175
Italy	3	4	2	4	1	14	ENI	29,444,315	3
Japan	22	21	34	30	23	130	Nissan Motor	16,245,315	15
Kuwait	1	0	0	0	0	1	Kuwait Petroleum	20,556,871	6
Luxembourg	0	0	0	0	1	1	ARBED	1,155,460	407
Mexico	1	1	0	3	1	6	Pemex (Petróleos Mexicanos)	18,804,190	11
Netherlands	4	1	0	2	3	10	Philips' Gloeilampenfabrieken	17,069,155	12
Netherlands-Antilles	1	0	0	1	0	2	Schlumberger	5,977,938	73
Netherlands-Britain	1	0	0	0	0	1	Royal Dutch/Shell Group	82,291,728	1
New Zealand	0	0	0	1	0	1	Fletcher Challenge	1,641,212	303
Norway	0	1	1	0	1	3	Norsk Hydro	3,360,390	146
Peru	0	0	0	1	0	1	PETROPERU	1,250,549	381
Philippines	0	1	0	0	0	1	Philippine National Oil	2,840,889	168
Portugal	0	1	0	0	0	1	PETROGAL (Petróleos de Portugal)	2,595,791	187
South Africa	1	1	1	3	1	7	Barlow Rand	5,584,426	81
South Korea	3	2	3	2	0	10	Hyundai Group	7,211,590	51
Spain	1	1	3	3	3	11	ENPETROL	5,317,401	88
Sweden	2	5	1	8	6	22	Volvo	9,538,577	35
Switzerland	3	3	2	2	1	11	Nestlé	14,172,074	25
Taiwan	1	0	1	0	0	2	Chinese Petroleum	5,957,679	74
Turkey	1	2	0	0	0	3	Türkiye Petrolleri	4,759,508	100
Venezuela	1	0	0	0	0	1	Petróleos de Venezuela	19,659,115	8
Zambia	0	1	0	0	0	1	Zambia Industrial & Mining	2,749,349	178

THE FORTUNE DIRECTORY OF THE 100 LARGEST COMMERCIAL-BANKING COMPANIES OUTSIDE THE UNITED STATES

(Ranked by assets)

In international banking last year the Canadians were the climbers. Six Canadian banks are ranked on FORTUNE's list of the largest foreign commercial-banking companies, expanded this year from 50 to 100. As a group, the Canadian banks had a remarkable year in 1981: on average, they had an increase in assets, denominated in U.S. dollars, of 23%. The biggest of them, Royal Bank of Canada, recorded the largest increase of all banks on the list: it added 36% to its assets, which totaled $73 billion at the end of the fiscal year. That carried Royal Bank from No. 19 to No. 14 on the list. Canadian Imperial Bank of Commerce, the second largest, added 18% to its assets and moved up from No. 31 to No. 22. After Royal Bank, the bank with the largest asset growth was Toronto-Dominion, up 30% to $37 billion; unlisted last year, Toronto-Dominion appears as No. 49 this year.

These great gains by the Canadian banks are largely attributable to their expansion abroad, especially in the U.S. At home in Canada, things were slow last year: the only significant growth was in the energy field. Canadian banks have developed special skills in energy financing, and these skills have propelled them south. Royal Bank has representative offices throughout the U.S., including the oil capitals of Houston, Dallas, and Denver.

The eagerness of Canadian banks to make loans to energy companies at home has brought special risks. To discourage such risk-taking, Canada's inspector general of banks moved last summer to restrict bank lending in the energy field. Dome Petroleum, once the proud forerunner in Canadian energy, has borrowed several billion dollars from Canadian banks and is now fighting to avoid collapse. Toronto-Dominion and Canadian Imperial are said to be Dome's largest lenders. Another leading lender is assumed to be the Bank of Montreal, up 13 places from last year's ranking and now No. 26 on the list.

As they were last year, the largest banks on the list are French. Banking in France is highly concentrated: in a country of 54 million people, there are only a dozen major banks. The top four French banks—the first three on our list plus No. 6—do two-thirds of the nation's banking. But these giants showed very little increase in dollar-denominated assets last year. Société Générale, No. 6, dropped two places this year. The No. 4 rank now belongs to Japan's Dai-Ichi Kangyo.

The country with most banks on the list is Japan, which has 24 among the 100. The Japanese banks increased their assets only modestly relative to their performance in 1980 because on September 30, 1981, which was the last day of their fiscal year, the yen had dipped against the dollar. Overall last year, the yen gained 2.7% against the dollar. The assets of Japanese banks represent nearly 28% of the total assets on the directory.

Still in the ascendant on the list is another Asian entry, the Hongkong & Shanghai Banking Corp. A newcomer to the list in 1981, it now ranks No. 25.

The weakness of the deutsche mark relative to the dollar hurt German banks last year. Among them, only Deutsche Bank retained its place, ranking No. 7. Other German banks—12 of them are on the list—dropped an average of six places.

—JEFFREY F. RAYPORT

RANK '81	RANK '80	BANK
1	1	**Banque Nationale de Paris**[7]
2	2	Caisse Nationale de Crédit Agricole[7]
3	3	**Crédit Lyonnais**[7]
4	6	Dai-Ichi Kangyo Bank[8,9]
5	5	**Barclays**
6	4	Société Générale[7]
7	7	**Deutsche Bank**[11]
8	11	Sumitomo Bank[8,9]
9	8	**National Westminster Bank**
10	9	Mitsubishi Bank[8,9]
11	10	**Fuji Bank**[8,9]
12	14	Midland Bank
13	12	**Sanwa Bank**[8,9]
14	19	Royal Bank of Canada[12]
15	18	**Bank of Tokyo**[13]
16	22	Banco do Brasil[7,9]
17	15	**Industrial Bank of Japan**[8,9]
18	30	Norinchukin Bank[9,13]
19	13	**Dresdner Bank**[11]
20	17	Cie Financière de Suez[14]
21	20	**Mitsui Bank**[8,9]
22	31	Canadian Imperial Bank of Commerce[12]
23	16	**Westdeutsche Landesbank Girozentrale**[7,11]
24	23	Tokai Bank[8,9]
25	29	**Hongkong & Shanghai Banking**
26	39	Bank of Montreal[12]
27	28	**Lloyds Bank**
28	36	Union Bank of Switzerland[9]
29	21	**Cie Financière de Paris et des Pays-Bas**[14]
30	27	Long-Term Credit Bank of Japan[8,9]
31	25	**Algemene Bank Nederland**
32	40	Swiss Bank[9]
33	33	**Taiyo Kobe Bank**[8,9]
34	24	Commerzbank[11]
35	34	**Rabobank**
36	35	Amsterdam-Rotterdam Bank
37	26	**Banca Nazionale del Lavoro**[7]
38	32	Bayerische Vereinsbank[11]
39	43	**Mitsubishi Trust & Banking**[8,9]
40	47	Bank of Nova Scotia[12]
41	48	**Credit Suisse**[9]
42	38	Bayerische Landesbank Girozentrale[9]
43	37	**Bayerische Hypotheken- und Wechsel-Bank**[11]
44	42	Daiwa Bank[8,9]
45	45	**Sumitomo Trust & Banking**[8,9]
46	46	Standard Chartered Bank
47	41	**Banco di Roma**[7,14]
48	49	Mitsui Trust & Banking[8,9]
49	●	**Toronto-Dominion Bank**[12]
50	44	Banca Commerciale Italiana[7,14]

●Not on last year's list.

[1] Asset figures have been converted into U.S. dollars using the market rate prevailing at each bank's fiscal year-end, which is December 31, 1981, unless otherwise noted. Figures for subsidiaries are included if they are more than 50% owned, unless otherwise noted. Daiwa Bank, Mitsubishi Trust & Banking, Mitsui Trust & Banking, Sumitomo Trust & Banking, Toyo Trust & Banking and Yasuda Trust & Banking include holdings of major trusts in their assets.

[7] Deposit figures have been converted into U.S. dollars using the market

COUNTRY	ASSETS[1] ($000)	INCREASE (DECREASE) IN U.S. DOLLARS %	INCREASE (DECREASE) IN LOCAL CURRENCIES %	DEPOSITS[2] ($000)	DEPOSITS[2] RANK	LOANS[3] ($000)	NET INCOME[4] ($000)	STOCK-HOLDERS' EQUITY[5] ($000)	OFFICES[6]	EMPLOYEES
France	107,909,617	0.43	25.55	96,702,031	1	77,647,695	204,623	1,379,826	2,486	58,751
France	98,870,716	(6.64)	16.71	81,579,359	4	73,808,555	266,357	5,237,088	10,200	63,369
France	94,754,065	(3.46)	20.69	85,648,977	3	78,581,777	190,983	1,646,311	2,283	45,386
Japan	93,487,930	5.61	16.42	67,482,489	9	52,673,383	137,476	1,763,228	337	23,834
Britain	93,360,080	5.34	31.42	86,946,745	2	72,132,305	683,231	4,341,305	5,300	130,000[10]
France	88,135,032	(2.25)	22.20	78,916,888	5	64,580,382	209,331	1,266,683	2,575	45,628
Germany	85,975,924	(2.82)	10.21	78,622,401	6	70,922,915	176,275	2,519,081	1,370	44,800
Japan	83,425,022	13.57	25.19	60,206,252	12	41,756,999	175,793	1,836,199	218	16,301
Britain	82,927,160	0.41	25.27	76,042,735	7	60,479,530	674,921	4,251,300	3,808	84,000
Japan	80,832,724	5.76	16.58	57,846,386	13	43,638,309	143,023	1,756,623	217	17,143
Japan	80,408,491	6.65	17.56	61,058,422	11	43,812,829	168,529	1,833,636	247	18,373
Britain	78,542,768	29.73	61.84	72,287,420	8	55,908,042	251,119	2,773,495	4,100	82,800[10]
Japan	73,238,924	4.23	14.89	56,155,472	14	41,386,481	135,739	1,555,499	239	18,020
Canada	72,748,651	36.07	39.28	62,855,590	10	44,265,077	240,496	1,780,053	1,574	38,783
Japan	67,734,684	21.25	2.54	42,304,921	30	29,830,207	121,514	1,131,993	234	14,018
Brazil	65,077,005	24.58	143.07	23,721,292	57	57,967,391	2,783,795	4,301,409	1,300	99,765
Japan	62,841,086	3.91	14.54	49,515,050	18	36,742,997	139,839	1,400,441	25	5,146
Japan	60,636,471	28.32	8.52	52,930,959	16	28,917,016	23,601	354,247	38	3,045
Germany	58,750,088	(6.14)	6.43	54,595,141	15	48,498,085	71,899	1,649,971	1,142	31,070
France	57,683,942	0.71	25.90	37,931,076	36	45,467,863	177,287	1,268,943	1,685	37,327
Japan	57,002,989	7.92	18.96	42,928,921	27	31,905,561	92,987	1,061,016	183	12,334
Canada	55,565,259	17.82	20.60	47,555,478	21	36,430,508	241,884	1,337,975	1,710	36,665
Germany	55,506,838	(4.13)	8.72	51,912,339	17	46,207,550	29,977	1,242,523	13	7,408
Japan	54,995,293	7.84	18.87	42,389,546	29	29,427,416	86,863	1,057,060	240	15,183
Hong Kong	53,699,206	13.61	25.21	47,609,356	20	25,653,310	358,495	2,481,906	940	41,612
Canada	53,017,669	27.58	30.58	45,358,637	22	33,063,945	215,500	1,345,321	1,322	28,582
Britain	52,970,815	11.61	39.24	48,466,735	19	47,847,233	395,629	3,279,629	2,956	66,033
Switzerland	52,425,962	20.88	20.91	44,605,084	24	39,050,122	195,081	2,970,147	240	16,514
France	50,662,718	(3.10)	21.14	27,623,336	49	33,451,079	127,784	1,609,397	1,041	25,191
Japan	50,016,994	4.53	15.23	41,480,389	31	30,678,513	114,273	1,208,313	23	3,501
Netherlands	49,944,234	(1.25)	12.76	44,648,227	23	28,437,108	137,176	1,183,580	928	28,351
Switzerland	48,967,934	18.11	18.14	42,652,678	28	36,515,426	164,398	2,686,577	207	13,953
Japan	47,482,165	3.29	13.86	37,160,548	38	27,244,753	67,740	921,008	341	15,389
Germany	45,280,171	(10.66)	1.31	43,067,234	26	39,394,352	12,918	1,213,470	878	21,130
Netherlands	44,982,829	(0.87)	13.20	43,076,183	25	31,376,108	211,344	1,906,646	3,071	27,938
Netherlands	44,633,809	1.77	16.21	39,422,184	33	26,035,361	105,869	1,128,487	884	24,277
Italy	44,187,374	(9.47)	16.39	38,863,833	34	26,892,429	44,733	1,587,976	374	22,190
Germany	43,923,731	(5.36)	7.32	41,174,575	32	38,923,442	64,015	910,793	478	12,632
Japan	42,584,908	7.75	18.77	38,045,506	35	23,154,107	45,306	664,126	53	6,058
Canada	41,677,758	13.45	16.12	35,737,911	39	25,091,243	110,911	1,438,523	1,133	23,815
Switzerland	41,151,027	15.88	15.92	35,340,675	40	30,638,867	140,923	2,506,249	167	12,320
Germany	40,589,459	(3.87)	9.01	33,713,661	42	31,884,157	50,629	932,087	5	3,997
Germany	39,874,633	(6.15)	6.43	37,667,870	37	34,945,129	46,042	800,284	528	11,596
Japan	38,908,451	(1.74)	8.31	31,959,686	46	22,271,558	51,136	637,290	163	11,406
Japan	37,992,813	2.97	13.51	34,006,636	41	21,997,084	46,298	660,846	53	6,252
Britain	37,959,322	3.06	28.57	32,699,008	43	31,099,217	273,414	1,959,045	1,599	54,646
Italy	37,856,727	(7.64)	18.75	25,978,823	52	19,352,288	67,322	440,010	432	16,067
Japan	37,374,405	5.50	16.29	32,346,651	44	21,992,049	39,118	553,982	50	5,925
Canada	37,292,229	29.51	32.56	31,195,155	47	23,546,575	141,143	1,057,666	1,029	18,925
Italy	36,931,161	(3.53)	24.03	32,093,239	45	25,749,682	70,986	1,301,082	463	21,163

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rate as of each bank's fiscal year-end. Figures for all German banks include their own bonds, so do the figures for Bank of Tokyo, Industrial Bank of Japan, Long-Term Credit Bank of Japan, and Norinchukin Bank. Banco do Brasil includes funds for refinancing. Figures for Swiss banks include medium-term notes.

[3] Loan figures have been converted into U.S. dollars using the market rate prevailing at each bank's fiscal year-end. Figures include loans to banks and at call or available on short notice.

[4] Net income figures have been converted into U.S. dollars using the average rate in the official exchange market during the bank's fiscal year. Net income is after taxes and excludes minority interest.

[5] Stockholders' equity figures have been converted into U.S. dollars using the market rate prevailing at each bank's fiscal year-end. Equity is the sum of capital stock, surplus, and retained earnings. Figures for all French banks are before appropriation of profits.

[6] Includes head office, branches, and agencies.

[7] Government owned.

[8] Figures are for fiscal year ending September 30, 1981.

[9] Parent company only.

[10] Average for the year.

[11] Excludes certain subsidiaries that are more than 50% owned.

[12] Figures are for fiscal year ending October 31, 1981.

[13] Figures are for fiscal year ending March 31, 1981.

[14] Includes certain subsidiaries owned 50% or less, either fully or on a prorated basis.

RANK '81	RANK '80	BANK	COUNTRY	ASSETS[1] ($000)	IN U.S. DOLLARS %	IN LOCAL CURRENCIES %	DEPOSITS[2] ($000)	DEPOSITS[2] RANK	LOANS[3] ($000)
51	●	Istituto Bancario San Paolo di Torino	Italy	35,701,764	22.50	57.51	22,191,284	60	11,283,963
52	50	Société Générale de Banque	Belgium	31,729,189	(9.87)	8.92	29,285,780	48	20,832,521
53	●	Nippon Credit Bank[8,9]	Japan	30,072,768	2.62	13.12	25,473,768	54	20,682,566
54	●	Credito Italiano[7,14]	Italy	29,941,522	(5.04)	22.09	27,294,834	50	20,903,085
55	●	Kyowa Bank[8,9]	Japan	29,907,837	(4.43)	5.35	23,583,578	58	19,494,347
56	●	Deutsche Genossenschaftsbank[11]	Germany	29,025,573	(12.28)	(0.53)	26,205,166	51	25,214,215
57	●	Yasuda Trust & Banking[8,9]	Japan	28,601,562	4.08	14.73	25,121,942	55	15,785,640
58	●	Monte dei Paschi di Siena	Italy	28,196,891	(5.17)	21.92	25,527,785	53	10,276,817
59	●	Banco di Napoli[7]	Italy	27,709,858	(0.25)	28.25	15,645,626	80	7,878,337
60	●	Banco di Sicilia[7]	Italy	27,552,160	(2.07)	25.91	11,856,656	93	8,191,540
61	●	Hessische Landesbank-Girozentrale-[7,9]	Germany	26,390,944	(4.31)	8.32	22,057,921	61	20,072,094
62	●	Cassa di Risparmio delle Provincie Lombarde	Italy	25,926,395	(10.08)	15.61	19,984,311	67	15,387,071
63	●	Saitama Bank[8,9]	Japan	25,918,994	1.18	11.54	20,709,041	65	15,232,436
64	●	Bank für Gemeinwirtschaft	Germany	25,715,394	(16.18)	(4.94)	24,394,159	56	20,680,861
65	●	Banca Nazionale dell'Agricoltura[9]	Italy	24,849,662	9.18	40.38	11,650,436	95	7,851,271
66	●	Groupe Bruxelles Lambert[8]	Belgium	24,792,184	(6.65)	22.64	22,344,873	59	8,776,506
67	●	Kredietbank[13]	Belgium	24,011,297	10.72	22.86	21,791,523	62	9,883,761
68	●	Norddeutsche Landesbank Girozentrale[7,11]	Germany	23,122,762	(2.21)	10.90	21,148,842	64	18,688,658
69	●	Commonwealth Banking[7,15]	Australia	23,052,586	11.41	12.11	17,039,375	74	11,830,438
70	●	Toyo Trust & Banking[8,9]	Japan	22,724,945	(0.80)	9.35	20,438,038	66	13,108,361
71	●	Nederlandsche Middenstandsbank	Netherlands	22,612,038	1.57	15.98	21,337,033	63	13,830,791
72	●	Groupe des Banques Populaires	France	22,591,541	(7.51)	15.62	19,960,956	68	13,512,814
73	●	Skandinaviska Enskilda Banken	Sweden	22,578,039	9.73	37.46	18,953,618	69	11,245,030
74	●	Algemene Spaar-en Lijfrentekas	Belgium	21,446,961	(9.30)	9.62	18,158,188	71	20,831,630
75	●	Hokkaido Takushoku Bank[8,9]	Japan	21,367,779	(2.85)	7.10	15,457,881	81	11,821,014
76	●	Bank of New South Wales[8]	Australia	20,991,538	11.07	13.81	13,608,611	85	14,310,488
77	●	Crédit Communal de Belgique	Belgium	20,822,950	(5.45)	14.27	18,336,275	70	15,152,075
78	●	Bank Leumi le-Israel[11]	Israel	20,336,367	10.05	127.50	15,971,965	78	9,592,247
79	●	Bank of Yokohama[8,9]	Japan	20,169,804	6.60	17.51	16,634,344	75	12,418,877
80	●	Credit Mutuel*	France	19,911,880	(12.30)	9.64	14,793,190	82	8,707,050
81	●	Australia & New Zealand Banking[8]	Australia	19,157,204	6.30	8.92	15,666,735	79	12,025,128
82	●	Banca Popolare di Novara	Italy	19,078,544	(4.40)	22.92	8,980,163	99	3,233,078
83	●	Bank Hapoalim	Israel	19,068,725	12.11	131.77	12,341,609	92	12,316,893
84	●	Creditanstalt-Bankverein[7,11]	Austria	18,903,951	3.93	18.00	17,413,351	73	10,965,682
85	●	Svenska Handelsbanken	Sweden	18,754,164	(0.86)	24.19	14,526,098	83	10,199,671
86	●	Bancomer[9]	Mexico	18,534,161	27.24	44.31	17,540,444	72	9,809,271
87	●	Post-och Kreditbanken[7]	Sweden	18,001,702	(5.56)	18.30	16,026,286	76	9,332,091
88	●	Banco Nacional de México[9]	Mexico	17,062,312	30.48	47.99	15,975,998	77	8,361,594
89	●	State Bank of India[7]	India	16,945,776	10.74	27.29	13,070,862	87	10,273,088
90	●	Banco Espanol de Credito[9]	Spain	16,366,289	(7.79)	12.98	12,985,892	89	11,130,892
91	●	Banco Central[9]	Spain	16,187,537	(5.68)	15.57	13,284,460	86	11,579,678
92	●	National Bank of Canada[11]	Canada	15,924,631	13.68	16.35	14,459,401	84	10,387,484
93	●	Banco Hispano Americano[9]	Spain	15,447,183	(1.86)	20.25	12,699,600	91	10,976,006
94	●	Landesbank Rheinland-Pfalz-Girozentrale-[11]	Germany	14,919,811	0.71	14.21	13,044,488	88	11,133,911
95	●	Crédit Commercial de France	France	14,144,968	(4.71)	19.12	12,802,598	90	11,140,399
96	●	Banco Ambrosiano[11]	Italy	13,569,993	(9.34)	16.56	11,703,703	94	9,671,905
97	●	National Bank of Greece[7]	Greece	13,377,774	8.66	34.56	10,903,766	96	6,839,977
98	●	Banco de Bilbao[9]	Spain	13,277,548	(8.37)	12.27	10,744,911	97	9,337,345
99	●	Udružena Beogradska Banka	Yugoslavia	12,448,055	(21.90)	33.27	6,787,629	100	8,594,601
100	●	Hokuriku Bank[8,9]	Japan	12,216,721	(0.24)	9.97	9,962,227	98	8,016,172
		TOTALS		4,043,959,496			3,322,006,930		2,618,075,380

● Not on last year's list

* Preliminary figures

[11] Figures are for fiscal year ending June 30, 1981

NET INCOME[4] ($000)	STOCKHOLDERS' EQUITY[5] ($000)	OFFICES[6]	EMPLOYEES
97,915	1,188,660	453	12,865
61,678	855,163	1,174	15,673
76,416	783,314	20	1,838
81,419	976,959	379	18,355
46,269	668,770	241	11,466
23,294	478,743	11	2,191
28,323	394,658	52	4,797
44,325	1,316,681	671	14,870
4,958	459,058	502	13,648
6,339	428,820	310	8,392
19,985	534,409	6	2,920
28,759	1,312,991	462	10,289
42,858	546,319	170	9,144
(1,[illegible]32)	751,434	262	7,911
28,989	333,654	211	7,626
28,266	240,951	1,042	12,480
83,290	690,498	761	9,455
20,725	521,987	282	4,800
157,903	862,088	1,305	31,179
27,749	358,052	49	4,720
59,380	526,727	481	10,918
N.A.	506,768	1,780	26,050
72,905	360,839	364	6,844[10]
35,934	2,343,919	725	9,227[10]
37,320	418,300	186	7,317
198,089	1,265,297	1,358	24,211
8,440	227,014	1,336	2,615
104,219	315,425	439	15,569
43,470	610,110	172	7,729
1,684	633,240	3,068	16,000
236,763	1,060,726	1,390	23,778
28,436	540,421	371	7,226
139,316	294,311	361	9,691
17,019	528,168	305	9,058
44,140	231,931	455	5,475[10]
168,678	521,673	691	27,889
27,453	212,569	130	3,173[10]
168,552	562,872	648	25,555
17,450	270,201	6,110	162,853
131,504	912,460	2,123	19,822
119,166	912,202	1,800	18,865
17,051	373,058	757	14,399
96,605	782,367	1,361	17,806
5,570	238,434	6	1,926
37,031	327,272	222	7,062
120,652	N.A.	359	8,831
54,911	361,251	411	12,950
87,172	620,956	1,210	16,855
90,514	345,886	441	15,000
25,968	396,886	161	5,573
13,845,164	**116,534,837**		**2,233,488**

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Banca Nazionale dell'Agricoltura	65
Banca Popolare di Novara	82
Banco Ambrosiano	96
Banco Central	91
Banco de Bilbao	98
Banco di Napoli	59
Banco di Roma	47
Banco di Sicilia	60
Banco do Brasil	16
Banco Español de Credito	90
Banco Hispano Americano	93
Banco Nacional de México	88
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Bank Hapoalim	83
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Bank of Yokohama	79
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The figures in this issue of FORTUNE's Directory of Industrial Corporations Outside the U.S. were prepared by reporters Tom Post and Louis S. Richman. The figures on the 100 Largest Commercial-Banking Companies Outside the U.S. were prepared by reporter Jeffrey F. Rayport.

ALPHABETICAL INDEX OF THE 500 LARGEST INDUSTRIALS OUTSIDE THE U.S.

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The Bruising Battle for a Harlem Bank
Grumman's Victory in the Falklands and Lebanon
Forecast: The Big Interest-Rate Move Is Over

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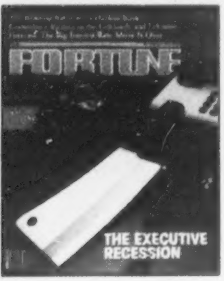

The unwelcome new management tool on the cover reflects the pay and benefit cutbacks of an austere climate for executives. The photograph is by Carl Zapp, and the article is on page 50.

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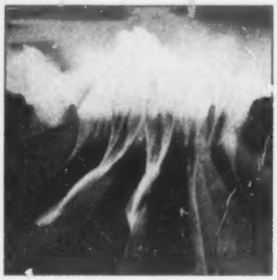
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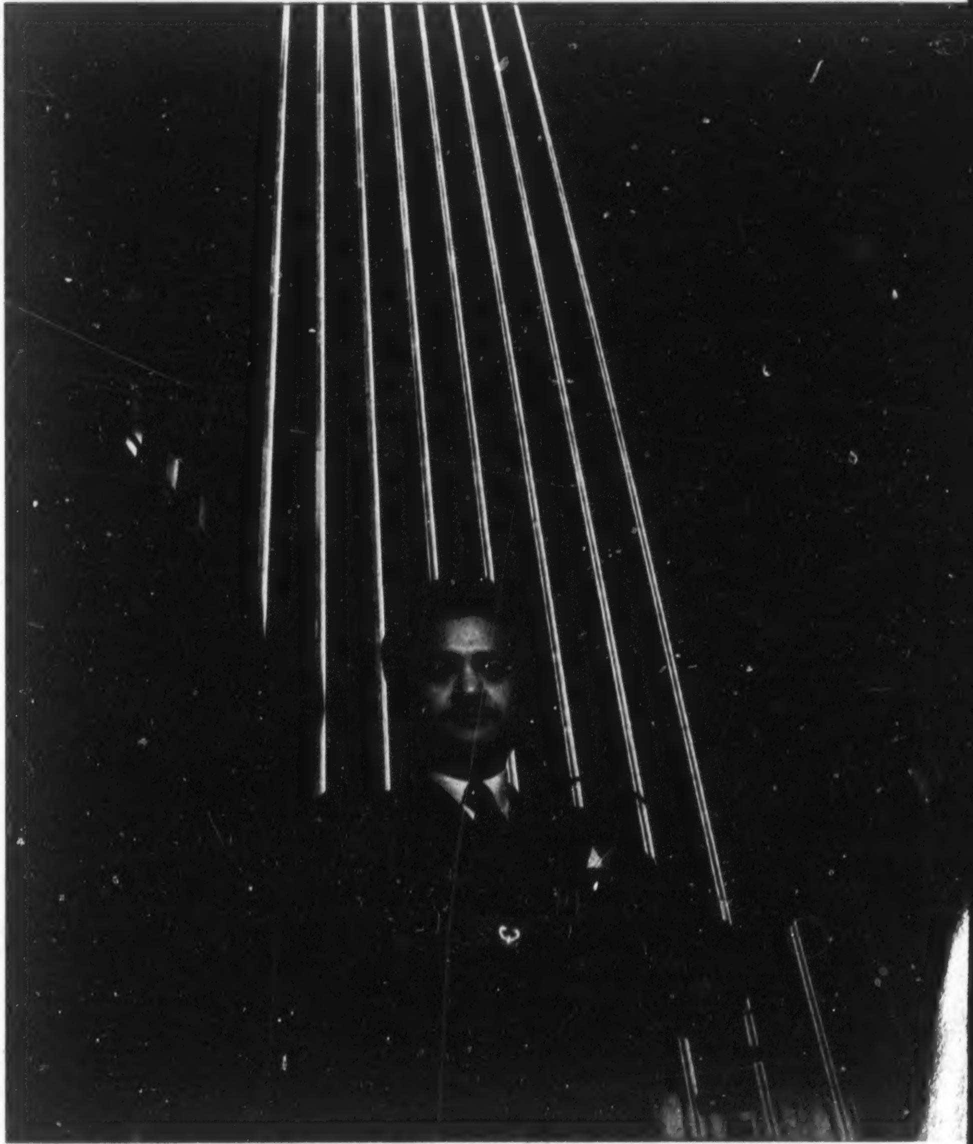
The Bruising Battle for a Harlem Bank

by JOHN F. BERRY

When the controlling block of stock in one of the most profitable commercial banks in New York City came up for grabs last fall, a bitter battle ensued. In the months since, the fight has raged along a predictable course, with some familiar players joining the fray. Wachtell Lipton Rosen & Katz, the Park Avenue law firm that specializes in takeover fights, took the bank's side, and investment bankers at Goldman Sachs lent a hand. Venomous lawsuits were filed and proxies distributed. In midsummer the two sides met at a contentious annual meeting at which the dissidents captured three of the 12 seats on the bank's board of directors and vowed to continue the fight for control.

One of the circumstances setting these events apart from other takeover battles is that all the principals in the struggle are black; only the hired guns are white. But what is more surprising is the target—little Freedom National Bank, headquartered on West 125th Street in the heart of Harlem. With over $127 million in assets last year, Freedom is one-tenth of 1% the size of Citibank (1981 assets: $103 billion). In average return on assets, however, Freedom National in 1981 outperformed the big New York banks (see chart, page 78).

The bank has achieved this record through shrewd management plus special advantages that it gains by being black-owned, including access to some of the nation's largest corporations, which ordinarily wouldn't have much to do with such a tiny outfit. Being black-owned also helps Freedom attract a high-powered board of directors. Federal law prohibits officers of one bank from serving on another bank's board, except in the case of minority-owned institutions or banks in



Travers J. Bell Jr. went after Freedom National from a base in lower Manhattan.

Freedom National's management pulled the tiny bank from the brink of failure. Now it is fighting a takeover attempt.

depressed areas. On Freedom's board are officers of Chase Manhattan and Morgan Guaranty Trust Co., as well as American Express and the big accounting firm of Arthur Young & Co.

The ruckus over Freedom National was started by Travers J. Bell Jr., 41, an aggressive venture capitalist who is president of Daniels & Bell Inc., the only black-owned firm that is a member of the New York Stock Exchange. Bell grew up in a Chicago housing project. After graduating from high school in 1959, he got a job at Dempsey Tegeler Co., a small brokerage firm where his father worked as a clerk. By his mid-20s, Bell was part of management, running most of Dempsey Tegeler's Midwest branches. In 1971 he moved to New York and, with capital provided by Daniel Lufkin of Donaldson Lufkin & Jenrette and others, started Daniels & Bell with a former Bache salesman, Willie Daniels. Daniels has dropped out of the firm.

Regarded as an interloper by Freedom National's management, Bell for years has been accumulating stock in the bank through a private holding company, Dan-Bell Group Inc., which is owned by his family and employs his father, two sisters, a daughter, son, nephew, and an ex-brother-in-law. Last year he was able to put his father on the Freedom National board. He says forthrightly that he wants control of the bank because he sees it as a good investment. But he also argues that Freedom National has done too little for the black community.

The mural behind President Sharnia Buford at Freedom National is of 125th Street.

"We lend with our head"

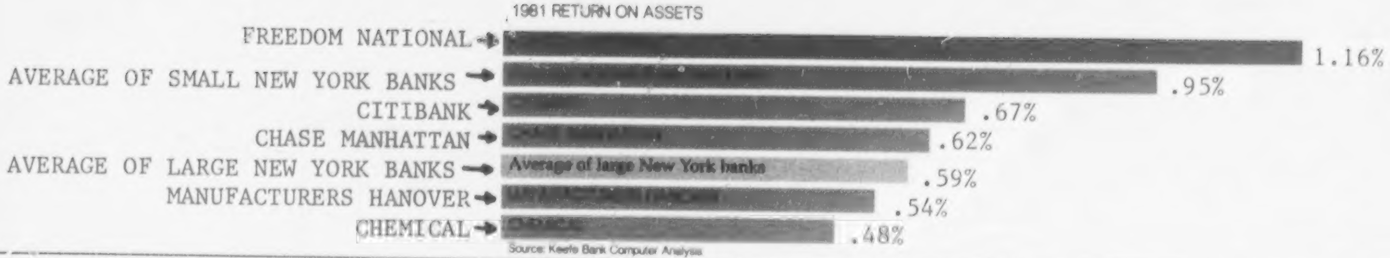
Freedom National's president and chief executive is Sharnia Buford, 43, who has been called Tab since early childhood. Tab Buford, whose total compensation from the bank was $138,000 last year, is the prototypical organization man, smooth, conservative, diplomatic, a careful administrator. One of 19 children, he grew up on a northeastern Texas farm and was president of the black-owned Douglass State Bank in Kansas City, Kansas, when he joined Freedom National in 1977. Though Buford emphasizes Freedom's links to the black community, he holds that the bank's first responsibility is to make money. Says Buford, in a measured Texas drawl, "We lend with our head, not with our heart."

Buford's principal ally in his struggle to fend off Bell is James H. Dowdy, 50, the strong-willed president of a powerful, federally funded nonprofit organization, Harlem Commonwealth Council (HCC), which is a large investor in Freedom National. Harlem born, Dowdy was a plumber who went into the vending-machine business. He joined the board of HCC a dozen years ago when the organization was floundering and about to lose its federal backing. Dowdy took charge and the feds kept the money flowing. In the years since, HCC has received over $30 million in federal aid. More than one-quarter of the money has gone into social programs, such as youth employment training and neighborhood grants. But about $17 million has been used as venture capital, and HCC has borrowed $23 million from commercial banks.

Dowdy has plowed the money into a broad array of businesses--a lumberyard, a foundry, a manufacturer of supermarket equipment, real estate, construction, computer services, and more—all operated under the HCC umbrella. HCC boasts that its companies have paid various governments nearly $15.5 million in payroll and real estate taxes. The organization charges the operating companies what Dowdy describes as a "modest percentage"—he won't be more specific—for management services. HCC owns Freedom National's storefront office on West 125th Street (annual rent: $74,952). In 1981 HCC paid Dowdy about $100,000.

Dowdy, who is at least as streetwise as his adversary, says of Bell: "He's trying to build an empire. He doesn't want to destroy the bank. He just wants it for himself." Bell is no cheek-turner. In an interview in May with the *Amsterdam News*, a black-owned New York daily, he called Dowdy and Freedom National's then chairman, Frank Savage, 44, "the Jesse James boys." If Freedom were a white-owned bank, he declared, "these guys

Photographs by Bill Hayward



Source: Keefe Bank Computer Analysis

Small Is Profitable

Little banks tend to realize more profit in relation to average assets than large ones because more of their lendable funds come from low-cost savings and checking accounts. Freedom National is unusual among small banks in that it also does a lot of business with big corporations.

would be in jail already." Dowdy and Savage, an Equitable Life vice president who has since left the Freedom board, say they are considering suing Bell for defamation of character.

Not long ago no one would have thought Freedom National worth fighting over. Founded in 1964 by Jackie Robinson, the first black player in major league baseball, the bank was put in the hole by bad loans during each of its first ten years, and it lost about $4 million. The original stockholders' equity of $2.5 million—mainly from black investors—was more than wiped out. In 1972 Robinson, as chairman, finally got a sophisticated financial hand on the board—J. Bruce Llewellyn, a black businessman who owns Fedco Foods Inc., a New York City supermarket chain. Two months later, Robinson died of a heart attack at 53 and Llewellyn became chairman.

A friend at Chase

In 1974, with the blessing of Chase Manhattan Chairman David Rockefeller, Llewellyn persuaded Hughlyn Fierce, a Chase vice president, to serve as president of Freedom National. (Fierce, 46, is now back at Chase.) Faced with a threat by the Comptroller of the Currency to close the bank, Llewellyn and Fierce turned for help to Rockefeller, to Walter Page, president of Morgan Guaranty, and to other friends in the New York financial community. At no charge, the investment banking houses of Morgan Stanley and Goldman Sachs worked up a private placement plan to recapitalize the bank. The city's major clearinghouse banks purchased $2.2 million of preferred stock carrying 4% and 6% dividends, while the Ford Foundation lent $1 million at 8% and granted a five-year moratorium on the interest.

The Ford Foundation's investment contained a significant stipulation that figures in Bell's bid for control of the bank. The stipulation was that the Harlem and Brooklyn communities had to invest at least $500,000 in the bank. When no individual investors came forward, HCC and another nonprofit community organization—Bedford Stuyvesant Restoration Corp., an organization conceived in the 1960s by Robert F. Kennedy and dedicated to rebuilding a devastated black neighborhood—each put up $250,000. Each organization got 10,000 shares of preferred stock, convertible into 44,444 shares of Freedom National's common—24.7% of the outstanding common.

Under Fierce and Buford, Freedom National was turned around. The bank was helped in the early years by the federal government's policy of encouraging minority-owned banks by depositing funds in them (see box, page 88).

But it is corporate connections that Freedom National has pursued most aggressively, seeking to get companies to pay their federal income and employee withholding taxes through it. This gives Freedom a foot in the corporate door, while providing a company with an easy—and no-cost—way of putting so-called conscience money into a minority enterprise. The company pays its taxes at the end of a business day and Freedom gets to control the money overnight, lending it to other banks before transmitting the tax payment to the Treasury. Some of the biggest corporations in New York pay part of their federal taxes through Freedom, among them Prudential Insurance, Schlumberger, International Paper, Avon Products, and American Broadcasting Co. Philip Morris, as one example, pays $5 million of federal taxes through Freedom National five times a year.

A 19-member professional staff, mostly trained in the city's big banks, puts together deals that are extremely sophisticated for a bank of Freedom National's size. In 1981 $46.5 million of the $52 million that the bank lent went to corporate borrowers. It might appear that Freedom would find its tiny loan limit—$650,000, about 10% of capital, to any one borrower—a handicap in lending to big borrowers. Freedom gets around that by putting together consortiums of minority banks. As agent, Freedom collects a fee from the corporation for handling the paperwork.

Sixty-eight banks, with Freedom National as the lead, participated in a recent $10-million syndication to Prudential, while last month 12 banks led by Freedom lent $2.5 million to Joseph E. Seagram & Sons. Heublein Inc. borrowed $4 million from a 16-bank syndicate headed by Freedom. Now Heublein has agreed to guarantee loans made by Freedom and other banks to minority purchasers of Heublein's Kentucky Fried Chicken franchises—a deal negotiated with Heublein by Operation PUSH, a civil rights organization led by the Reverend Jesse Jackson.

About 80% of the corporations that have established credit lines with Freedom National don't actually borrow the money. Instead the company uses its line of credit as collateral to borrow in the commercial paper market, where rates are lower. Philip Morris, probably Freedom National's foremost corporate friend, actually borrows from Freedom at prime as a favor to the bank. It's expensive money—recently the prime rate was around two percentage points higher than the rate on commercial paper—but the company says it is worth the price. "We're really looking at it as another marketing tool," says assistant treasurer Edward Silcock. "We're in the consumer business, and the more we can get our name splashed around, the better." To be sure that its name is adequately splashed, Philip Morris aims ads at black consumers describing its dealings with minority-owned banks.

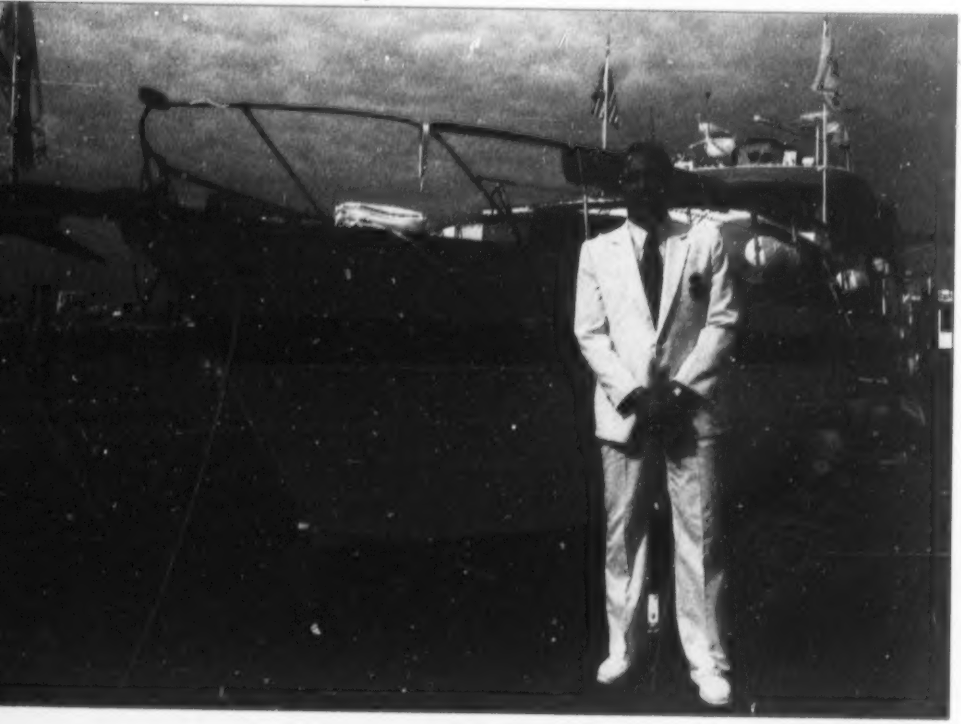
Risky consumer and real estate loans account for only 12.5% of Freedom National's total loans, about one-eighth the proportion for other banks its size. But what of Freedom National's professed role in the black community? Tab Buford claims that fully 30% of Freedom's loans went to blacks and their creditworthy organizations and enterprises. No matter that the

continued

bank is not structured to lend black consumers money to buy cars and houses. Freedom's boosters argue that just the presence of a successful black bank in Harlem and Bedford Stuyvesant is good for the communities. Possibly so, but to borrow Buford's imagery, Freedom's heart may be in Harlem and Bedford Stuyvesant, but its head these days is downtown.

Also downtown is Travers Bell Jr., who last year saw a chance to seize effective control of Freedom National by buying Bedford Stuyvesant Restoration's 10,000 shares of preferred stock. Bedford Stuyvesant received some $60 million in federal money over a 15-year period and invested those funds mostly in construction and building renovation in Brooklyn. When federal funds were slashed in the late 1970s, the community agency was caught with fixed assets and little cash. It decided to sell its Freedom National stock, and last October Bell bid $325,000.

James Dowdy, president of Harlem Commonwealth Council, controls the largest single block of Freedom National stock. Dowdy makes a sideline of buying, refurbishing, and selling boats—each bigger than the last. The 57-foot *Elsia III* is named for his wife, who serves as chef for weekend charters ($850 a day).



Bedford Stuyvesant turned him down cold. In November a group of bank directors led by Frank Savage bid $610,500—a little over book value—for the stock. Meantime Bell was continuing to buy stock wherever he could find it—one purchase was of just one share at $15—and the bank sued to enjoin Bell from buying more, alleging he had violated federal securities laws by failing to disclose that he was seeking control of the bank. A federal judge denied the injunction after the Savage group's offer for the Bedford Stuyvesant block surfaced, and the suit was later dismissed "with prejudice."

That deal did not go through, however—members of the Savage group began to disagree about their objectives and withdrew the offer. In April HCC stepped in and bought the stock at the $610,500 price. Declares Dowdy, "We categorically don't want control of Freedom." He promises that once Bell is rebuffed, HCC will sell the Bedford Stuyvesant stock in small quantities to individuals and organizations in the black community.

While trying to get the courts to cancel HCC's deal, Bell intensified his effort, through Daniels & Bell, to buy out small stockholders. Bell let it be known that he was so sure of success in his drive for control that he already was interviewing replacements for the bank's management, especially Tab Buford.

Acrimony over a loan

In the face of Bell's takeover threat, Buford visited John Whitehead, senior partner of Goldman Sachs, who directed him to Wachtell Lipton. After ten days of investigation, Wachtell founding partner George Katz decided, he says, that "Bell was not in the best interest of the bank, shareholders, or community." Wachtell Lipton took Freedom National as a client without charge, mounting a vigorous proxy campaign for election of the bank's slate of 12 directors and suing Bell. The suit charges that he failed to comply with federal securities laws and made an "unlawful tender offer" for Freedom's shares.

Acrimony between Bell and the bank is not new. In 1978 Bell guaranteed a $10,000 loan that Freedom National made to the then president of Daniels & Bell, who defaulted. Bell failed to make good on his guarantee until the bank sued; eventually Freedom settled for 90% of the loan. Bell blames "clerical mixups" at the bank for the slow settlement.

Bell is guarded in talking about his financial operations. He claims that the transaction volume of his brokerage firm, Daniels & Bell, now amounts to about $2 billion a year—a modest turnover by industry standards: Merrill Lynch Pierce Fenner & Smith last year handled $74 billion of publicly traded equities alone. His DanBell Group owns Daniels & Bell (Afri-

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Tempers and the temperature soared.

ca) Ltd., which Bell says counsels businesses in Togo, Niger, Algeria, and Ghana on contracting with American firms. More significantly, the holding company owns Cocoline Chocolate Co., a Brooklyn candymaker.

Bell says his stock acquisitions have been financed by "my own personal capital from my own personal and private resources." The best guess is that Bell's financing comes from DanBell Group's interest in Cocoline. Bell acknowledges that DanBell collects annual management fees of $150,000 from Cocoline, and Wachtell Lipton has alleged that DanBell also borrowed $235,000 from Cocoline on very liberal terms. But Bell claims that his advice to Cocoline on marketing, commodity hedging, cocoa buying in Africa, and corporate strategy has turned a $3-million-a-year company into what he says is an "extraordinarily profitable" concern with $15 million in annual sales. Asserts Bell: "Whatever that company can do to keep me happy, it should do and will do."

No time for soul talk

The showdown in the fight to control the prosperous little bank came in late July at Freedom National's annual meeting, held in a back room at HCC's headquarters, two blocks from the bank on West 125th Street. In the packed hall, tempers and the temperature soared as shareholders fanned themselves with proxies.

Bell, as usual elegantly dressed, in a deep-blue double-breasted suit, white shirt, and striped tie, addressed the stockholders as "brothers and sisters." They were in no mood for soul talk. They shouted, "No. Not here. Not that." Someone yelled, "Where were you in 1975?"—the year of Freedom's near collapse. Bell pressed on, suggesting that Freedom should get its advice from his black-owned firm, rather than accept the free services of Goldman Sachs. "That tactic is not going to work," Dowdy declared.

Althea Gibson, the 1957 and 1958 Wimbledon women's singles champion, was among the 200-plus stockholders. Now recreation manager for East Orange, New

continued

Jersey, Gibson bought 40 shares of Freedom in 1964 because she wanted to support the black institution and because Jackie Robinson was behind it. "It's the only stock I ever bought," says Gibson, who supported management against Bell.

Bell also had a famous athlete on hand for the meeting. His slate of seven candidates for the board included Charles "Mean Joe" Greene, 35, the former Pittsburgh Steelers defensive tackle who gained national recognition by making a TV commercial in which he flipped his sweaty football jersey to a kid in exchange for a Coca-Cola. Mean Joe is now an owner of a restaurant chain based in Dallas.

Upstairs about a dozen attorneys gathered in a conference room to count proxies in a tabulation overseen by representatives of Manufacturers Hanover. Nearly 90% of Freedom National's 106,655 shares outstanding, owned by 1,640 stockholders, were voted, an extraordinary turnout spurred by radio and newspaper advertising campaigns. The balance of power lay with the small stockholders. As the meeting opened, Bell and his backers held over 20% of Freedom's shares. HCC had been converting some of its preferred stock to common to offset Bell's purchases, but was caught a little short with 16%.

The counting dragged on until evening. With some proxies still contested, the meeting recessed. Four days later, the results were official. Management won nearly 90% of the uncommitted proxies, but because Freedom's bylaws call for cumulative voting, Bell got three seats on the board. (Under cumulative voting, each share carried 12 votes—one for each place to be filled on the board. These votes could be spread around or cast for a single candidate, thus increasing the chances of a minority candidate to be elected.) Bell did not choose Mean Joe to represent him on the board, but picked his father, a brother-in-law who is a regional manager with Bankers Trust, and the president of Cocoline.

A letter to the police

Bell says he doesn't think it would be appropriate to be on the board himself, but adds, "We will press our litigation and press for more shares." He has signaled a new and ugly phase in his rivalry with Dowdy. On the day the new board was constituted, Bell's attorney, Howard B. Sirota, 32, sent the New York City Police Department a letter alleging that Dowdy has a defective license for two pistols and that a numbers game operates at an HCC-owned building. Dowdy responds that the permit renewals are legal and that he has repeatedly told the authorities about the alleged numbers operation run by an HCC tenant. Says Dowdy: "My character has been assassinated by Mr. Bell."

Wachtell Lipton promises to stick around to keep an eye on Bell. George Katz says the firm will work with Freedom National "until such time as we and management are assured that dissident efforts to disrupt the bank's course or to use the bank as a personal power base are eliminated." In Harlem, the ballots may be counted but acrimony lingers on.

The Rapid Rise of Minority Banking

Chinese, blacks, Hispanics, and other minorities have long operated banks on the fringes of American finance, but it was President Richard Nixon who first gave special status to institutions such as those whose logos appear at right. (Clockwise from top left: Freedom National; American Indian National, Washington, D.C.; Hispanic-owned Popular Bancshares, Miami; black-owned United National, Washington; and Women's National, Washington.) In 1970 the Nixon Administration established the federal government's minority bank deposit program.

Under the program the Treasury Department encouraged federal agencies to deposit funds in minority-owned banks. In 1970 these banks had total deposits from all sources of $300 million. In fiscal 1981, deposits from government agencies alone averaged $302 million, and more than $18 billion in federal funds flowed through the banks.

When the program started there were only 28 minority-owned banks in the country. The number surged to a high of 100 in 1979. Nine of the banks have failed in the 12 years, eight black and the other Hispanic. According to Federal Reserve Board statistics, by the end of 1981 there were 95 minority-owned commercial banks with total deposits of $3.7 billion. (Bank of America, the nation's biggest bank, had $96 billion.) Forty-six banks are owned by blacks, 29 by Hispanics, eight by women, nine by Asians, and three by American Indians, Eskimos, and Aleuts.

While there are 17 more black than Hispanic banks, the latter have $1.4 billion in assets against $1.3 billion for black banks. Freedom National Bank, with $127 million in assets, is the biggest black-owned commercial bank in the country, but it is small change compared with such Hispanic-owned banks as the Bank of Miami, which has assets of $260 million.

The outlook for the minority banking program is uncertain. Tighter federal budgeting by the Reagan Administration and changing banking practices may doom the program. Agencies that once were told to seek out minority banks are now being ordered to emphasize managing their money in the most efficient way possible. For example, not long ago minority-owned banks were allowed to hold federal income- and employment-tax payments from corporations for upwards of a week. Now all banks must pay interest if they hold such deposits longer than overnight.

Changing banking practices may make it difficult for many minority-owned banks to keep growing, because of added competition. The Community Reinvestment Act of 1978 bars big banks from "red-lining"—refusing to offer mortgages to sections of a city where minorities live—and other restrictive practices. Now the big banks are putting branches in sections that minority bankers once had to themselves.

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Do We Have Too Many Venture Capitalists?
How Sick Companies Endanger the Pension System
Japan's Computer Inc.

$3.00 October 4, 1982

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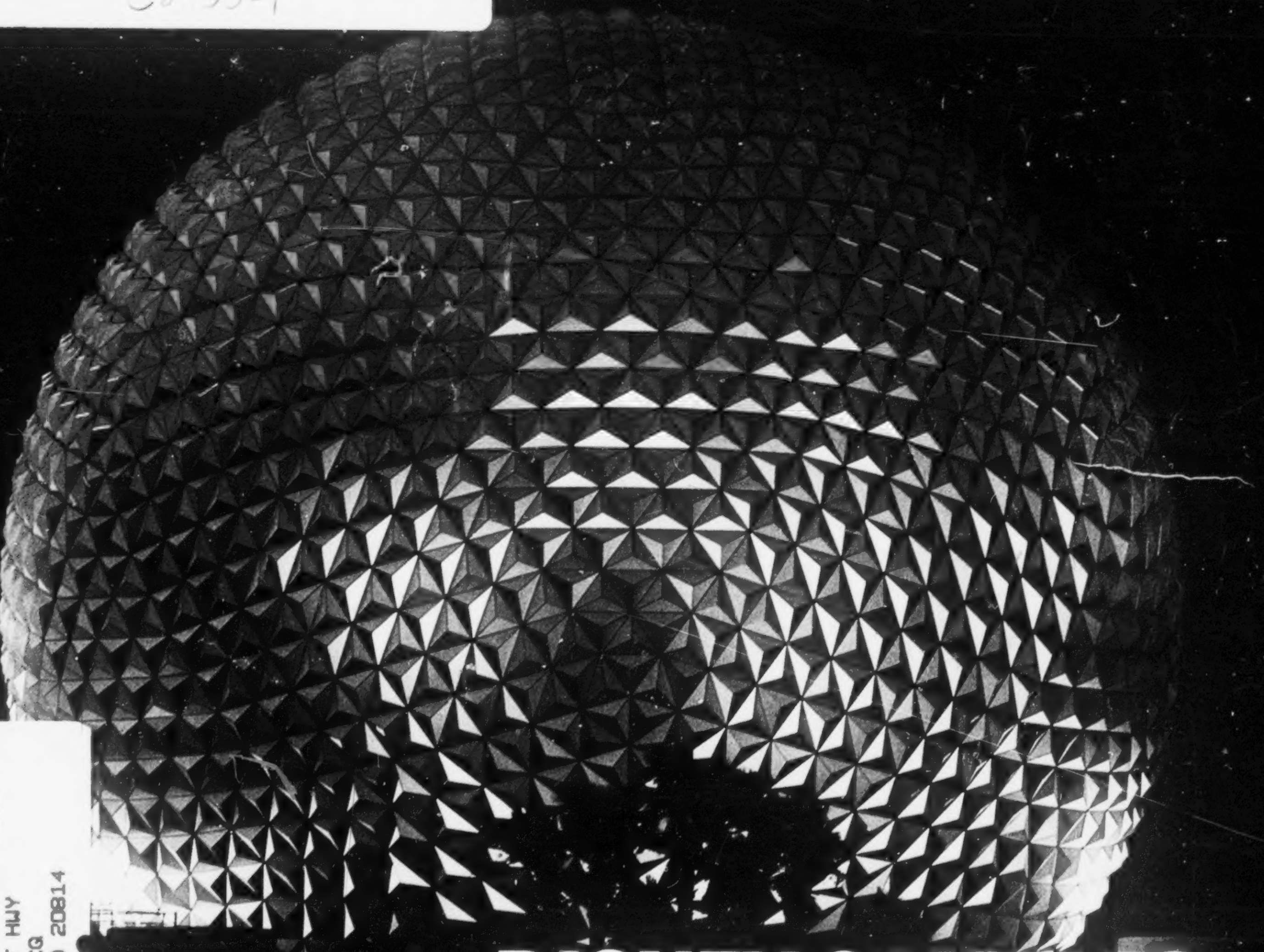

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DISNEY GAMBLES ON TOMORROW

Spaceship Earth at the new Epcot Center

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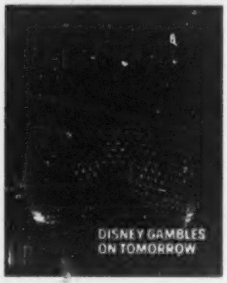
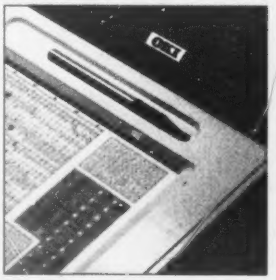


The 180-foot-high polished aluminum sphere of Spaceship Earth, towering over the new Epcot Center at Disney World, was photographed by John Madere. Disney's high hopes for Epcot Center are examined in the article on page 62.



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TROUBLE

How Sick Companies Are Endangering the Pension System

If many of their retirement plans topple, the government agency that insures them could go broke.

by GEOFFREY COLVIN

On August 20, three months after its celebrated bankruptcy, lawyers for Braniff International showed up in a Fort Worth federal court with more bad news. Four of Braniff's pension funds, it seems, needed at least $164 million to pay the employees all the future retirement benefits they had been promised. Unfortunately, the funds had assets worth only about $106 million. If the news caused any employees to reel with visions of living out their golden years in boxcars, they were surely relieved to learn that their pensions are safe—insured by the Pension Benefit Guaranty Corporation, which Congress created in 1974 for just such cases.

But while the future looks secure for Braniff pensioners, the PBGC's future is not. Assuming the court declares the pension funds in default, the PBGC will be hit with one of the biggest unfunded pension liabilities it has had to catch. The biggest so far is the $56 million it inherited following the failure of White Motor. Just two weeks ago another large plan went over with a heavy thud when Rath Packing, a long-troubled Iowa meat processor, told the PBGC it intends to fold its plan, which has an unfunded liability of $41 million. Smaller plans are also raining down on the PBGC in growing numbers—130 in the last 11 months—the result of business failures that have lately reached Depression-era levels. Up to now the PBGC has caught all the fallen plans, and there's no immediate danger of it collapsing under the strain. But the recent spate of defunct plans, plus the scarifying and hardly unthinkable prospect of a monster liability like Chrysler's coming in, have highlighted flaws in the pension insurance system. They have been there all along and could eventually threaten the PBGC's ability to do its job.

Research associate: Robert Steyer

Fixes are in the works

Several proposed solutions are now circulating in Washington, some of them in a bill before Senate and House committees. Regardless of which fixes are adopted, and some probably will be, it looks as if the private pension system is in for fundamental changes that will affect all companies with pension plans—and not just companies in trouble.

Congress begat the current worrisome situation when it passed the Employee Retirement Income Security Act in 1974. It meant well. Before ERISA, employees of a failed company like Braniff were usually left out in the cold. Further, it wasn't even necessary for a company to go bankrupt to strand employees without pensions they had been promised; the company could end its pension plan whenever it liked. The most notorious example occurred in 1963 when Studebaker closed its South Bend car factory and stopped payments to the seriously underfunded plan that covered the workers. Only those already retired or on the verge of retirement got the pension benefits they had been counting on. Others got only a fraction—or nothing.

Spurred by the Studebaker case and a tendency of some corporate managements to make bighearted pension promises their successors would have to fulfill, Congress decided to insure the type of private pension plan most workers rely on for retirement income. This is called a defined-benefit plan because the company promises the employee a specific pension, usually based on pay and years of service. Such plans now cover 36 million workers.

The PBGC's job is to act as an insurance company, collecting annual premiums from defined-benefit plans. A company can still walk away from an underfunded plan, but it must then hand over up to 30% of its net worth to repair the deficit. The PBGC fully guarantees only benefit promises that have been in effect for at least five years and guarantees them only up to cer-

Roth
PENSION BENEFIT-GUARANTY CORP.

tain limits. The insured amount is usually about 85% of the total benefits promised under a plan. Still, as retirees, most workers end up getting nearly all of what's promised to them. For a notable exception, see the box on the next page.

The system has worked fine so far, but it contains a couple of time bombs that could go off sometime soon. One is the premium setup, which has never made sense. From the beginning the annual premium per participant has been the same for all plans, ignoring the fact that some plans—such as those that have big unfunded liabilities and sick corporate parents—pose far greater risks to the system than others.

The PBGC should ask Congress for authority to make the system fair by imposing a risk-related premium. The agency has been reluctant to take on the job of assessing such risks, which is particularly tough but not undoable. The PBGC also argues that a truly fair premium for companies like International Harvester and Chrysler might lead them to terminate their plans. But the premium change could be phased in gradually, and over time would encourage all companies to put their plans on a sound footing.

In addition, the premium has never been high enough. It started out at $1 a year for each worker covered and has since risen to $2.60 but still doesn't come close to generating the funds the PBGC might need. The agency estimates that by year-end its deficit—in essence, its own unfunded liability—will total $236 million. If any of those large plans in the table on the next page should fold, the PBGC's deficit could mushroom overnight.

Bailing out on the cheap

The second ticking bomb is the rule covering companies that end their plans. Having to turn over 30% of net worth sounds like quite a deterrent, but in some cases that provision *encourages* sick companies to end ailing plans. If a company has a plan with an unfunded liability of $50 million, for example, and its net worth is $30 million, it could end the plan, give $9 million (30% of $30 million) to the PBGC and be

TEMPTATIONS TO PASS THE PENSION BUCK

Company	Unfunded pension liability* (in millions)	Cost to company if it abandons plan (in millions)	Potential PBGC liability (in millions)
CHRYSLER	$1,658.2	$211.1	$575.1
UNIROYAL	$434.8	$70.7	$219.1
WHEELING-PITTSBURGH STEEL	$292.0	$21.2	$175.5
INTERNATIONAL HARVESTER	$560.4	$48.5	$86.4

*Estimated by Hewitt Associates

Under present law, which urgently needs revision, many companies with underfunded retirement plans can come out strikingly ahead by unloading them on the government's Pension Benefit Guaranty Corporation. They have to cough up 30% of net worth, but for the companies shown here it might be a good deal.

rid of a $50-million liability plus the annual contributions.

The only company that appears to have made it through the loophole so far is AlloyTek, a small producer of jet engine components in Grand Rapids, Michigan. In late 1979 AlloyTek ended its underfunded defined-benefit plan out of "economic necessity," according to President Ray Fountain, 44. "We were in very precarious financial straits," he says. "We had a big problem in borrowing because of our unfunded pension liability."

The plan was $4.5 million under water, and since the company said it had no net worth—30% of which obviously equals nothing—the PBGC stood to inherit the whole liability. But when AlloyTek started a new plan, the PBGC refused to accept the liability of the old one, arguing that AlloyTek hadn't really dropped its retirement plan at all—just its liability. The PBGC settled some issues out of court last year on terms that seemed favorable to AlloyTek. The company agreed to drop its new plan but soon replaced it by contributing to Individual Retirement Accounts, which are free of PBGC regulations. The PBGC may still dispute AlloyTek's claim of no net worth, but whatever the outcome, the bulk of that $4.5-million liability now belongs to the PBGC. AlloyTek says chucking the liability saved its life.

International Harvester's shadow

While AlloyTek's situation may have been unusually desperate, the looming possibility is that some of the biggest troubled companies might now follow the legal trail it has blazed. That possibility grew considerably more credible with Rath Packing's recent action, which was precisely along these lines. Its unfunded liability of $41 million compares with a net worth of about $1 million.

The move is still far from an easy out. A strong union might be able to cite a contract provision to block use of the loophole, and the action would hardly enhance a company's reputation as a keeper of its word. But for some it could still be worth it. According to Dallas L. Salisbury, 33, director of a Washington think tank called the Employee Benefit Research Institute, the main reason for the current concern about the PBGC is "the fear of the Harvesters of the world voluntarily terminating their pension plans when they know that 30% of net worth may be a very good deal."

As the table shows, that could throw some painfully heavy liabilities onto the PBGC. There wouldn't be any immediate threat to the PBGC's ability to pay out benefits because those liabilities are spread over 40 or 50 years. The PBGC's present assets plus those it would take on would enable it to continue paying benefits for five years or more. But to avoid a cash crunch down the road, it would have to raise its premium now—and the increases could be dramatic. The PBGC has already asked Congress for an increase to $6 per covered worker. Depending on which plans were folded and when, it could have to ask for $10, $20, or more.

Those are still small sums compared with total pension costs, but companies with healthy plans could become indignant about subsidizing losers. Sound companies might move in increasing numbers to so-called defined-contribution plans, which have grown more alluring since ERISA was passed. Under them, an employer promises only to pay a certain amount into the fund every year, and the fund's assets are invested. How much a worker gets at retirement depends on how the investments are doing. Such plans are less regulated than defined-benefit plans and aren't insured by the PBGC.

With the strongest plans leaving the insurance system, the weak plans would be left to support each other, which obviously wouldn't work for long. Carried to its most chilling extreme, this scenario has the pension insurance system in ruins and Congress stepping in to guarantee pensions out of general tax revenues—in return, perhaps, for more regulatory power.

The PBGC's plight could get even worse unless the earning power of the pension funds remains at recent high levels. Interest rates have a powerful effect on the value of a pension plan's liabilities. Pension plan administrators must figure out how much they need today to cover liabilities that extend decades into the future—an amount called the present value of the benefits. When interest rates are extremely high, as they have been until recently, the

continued

Harding Lawrence Has a Problem

When Harding L. Lawrence, 62, was forced out as chief executive of Braniff International two years ago, he at least had the solace of a $306,000-a-year pension—or so it seemed. Now Braniff has filed for reorganization under Chapter 11 and has asked a judge to declare four of its pension plans, including the one covering Lawrence, in default. Assuming that happens, Lawrence will see his pension go into a dive almost as steep as Braniff's own. Lawrence's new pension couldn't be more than the maximum now paid by the government's Pension Benefit Guaranty Corporation, which would take over the plans: $16,568 a year.

As a private attorney, Edwin M. Jones, 65, specialized in pension matters. Now he runs the Pension Benefit Guaranty Corporation, which has found 30 major firms that might want to leave their underfunded pension plans at his door. If they did, he says, "PBGC estimates it would suffer $3.1 billion in losses." And that would make employers' insurance premiums skyrocket.

present value of the benefits is relatively low because it takes a smaller portfolio of securities to yield enough income to meet the pension obligations. But when rates fall, the present value of benefits can skyrocket. The PBGC now assumes an 11% rate—the highest in its history, though it should eventually fall, as other rates have. FORTUNE has assumed a 10% rate in the table on page 74.

The precise relationship varies with each plan, but a drop in interest rates from 10% to 7%, for example, would in most cases raise the present value of the benefits by at least 50%. Of course, a drop in rates should also cause the pension fund's assets to increase in value—witness the recent stock market boom when rates tumbled—but in practice they don't increase as much as the liabilities. So while those potential PBGC liabilities in the table may look frighteningly large, they could easily get a lot larger.

Before they balloon would be the best time to fix the system with a few changes in the law. A risk-related premium is one needed reform, and another is to close that giant loophole through which companies can walk away from their plans. Congress could do that by requiring the PBGC to rescue a plan only when a company was truly defunct and in liquidation. If a company terminated its underfunded plan but stayed in business, it would have to make up the underfunding—completely—over a period of years. Even filing for bankruptcy wouldn't dump the liability on the PBGC, since a company could conceivably file, reorganize, return to health, and eventually get its pension plan back up to strength.

That proposal is part of a bill introduced in the Senate by Don Nickles, an Oklahoma Republican, and in the House by John Erlenborn, a Republican from Illinois. The proposal has the support of the Reagan Administration and the ERISA Industry Committee, a lobbying group of 115 major corporations with healthy pension plans that want to keep their premiums down. It is also backed by the U.S. Chamber of Commerce and the National Association of Manufacturers.

The bill includes other changes that aren't so strongly supported. It would in some cases give the PBGC the status of a general creditor when a company goes bust, an idea the PBGC is pushing but one that gives many executives the willies. It could make the unfunded pension liability of even a stalwart company a major factor in the company's ability to get credit.

The bill would also make it nearly impossible for a big company to sell or spin off a subsidiary with a weak plan and avoid all liability if the unit ends the plan or goes under. It's not clear that a company can expect to get away with this now, but a few have. The bill would make the parent liable for up to 15 years.

Though the bill probably won't go far this year, action next year seems likely to many pension lobbyists. But those less popular provisions would probably have to be watered down. As Dallas Salisbury notes, "They're controversial enough that they could readily keep you from getting a loophole closed—the main loophole."

Marriage for keeps

If Congress manages to close the loophole it will deeply alter the relation between a company and its plan by completing a change that began with the passage of ERISA. Previously a company could set up a plan and then simply cast it aside if it became burdensome. ERISA still lets a company divorce its plan, but at a cost—forfeiting that 30% of net worth. The final step is to treat the pension promise like any other company promise to pay. Company and plan would be bonded, in effect, till death us do part.

The mere prospect of that is already causing companies to weigh their pension vows more seriously. Some now consider the plan an important element of finance rather than part of the "human resources" department. Other companies, shifting to defined-contribution plans, have decided not to make such vows at all.

While that trend worries the PBGC, there's a way to prevent the shift away from defined-benefit plans from growing into a stampede. That's to make the premium adequate and risk-related, and to put a stopper in the big loophole. The result would be a stronger and more equitable insurance system that would leave the PBGC—and most of those who pay its premiums—better off.

HOUSING

The Other Way Builders Make a Buck

Jud Mentzel

by GURNEY BRECKENFELD

In their struggle to remain afloat financially during the housing industry's worst year since 1945, quite a number of the largest homebuilding companies have been enjoying a big lift from a surprising source. Profits from their mortgage banking subsidiaries have cushioned the impact of plunging sales and swollen inventories of unsold houses.

That is an extraordinary reversal of what's normal among the building giants. In good times their profits from homebuilding dwarf their profits from mortgage banking, which involves advancing loans to home buyers, selling those loans to investors, and, in most cases, collecting and passing along the monthly payments from the borrowers. As this bundle of activities makes clear, the term mortgage banking is something of a misnomer, since its practitioners usually have only modest capital of their own and serve mainly as conduits.

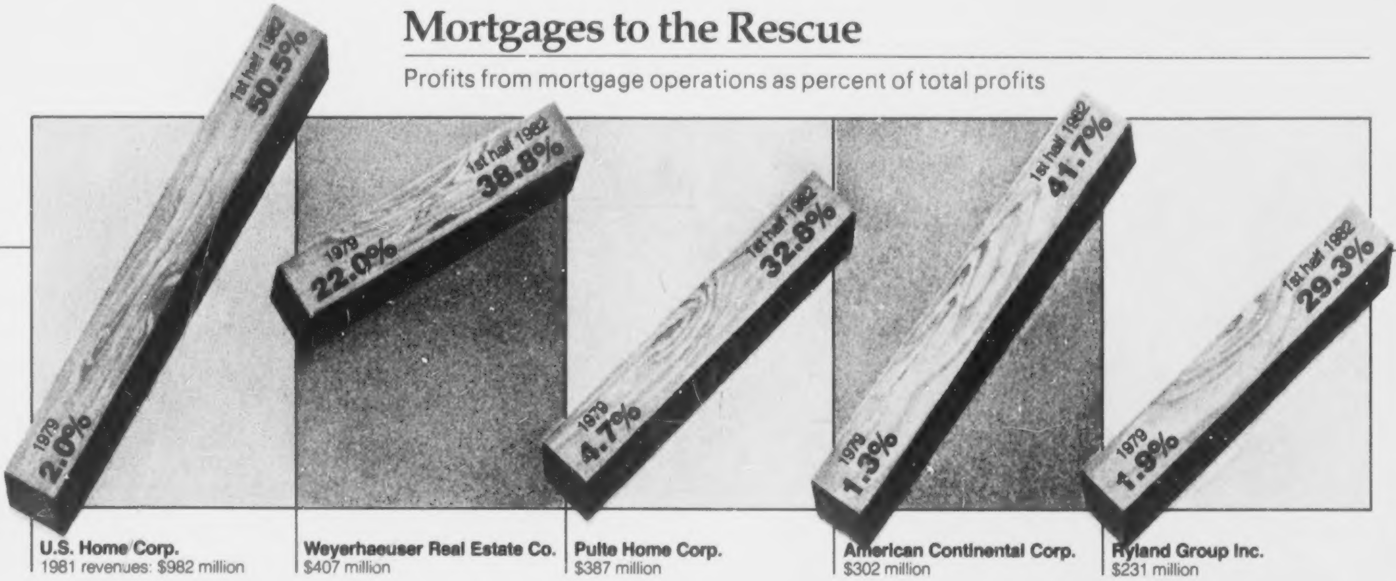
With housing as sick as it is, the new eminence of mortgage profits is not surprising to the builders themselves. In the words of Isaac Heimbinder, senior vice president for finance at U.S. Home Corp., "Any builder with a financial services company would look to that company to throw off a disproportionate amount of money nowadays."

That is certainly the case with Houston-based U.S. Home, the nation's largest builder of one-family houses. The company operates in 135 cities in 18 states. Its revenues last year came to $982 million, but only the sale of land and lots kept its housing divisions out of the red. "We haven't made any money from housing operations in 12 months," says Heimbinder. In the first half of this year, in fact, U.S. Home lost $1.1 million in housing, even after allowing for an income tax credit. Yet the company managed to report a net profit of nearly $2.8 million for the half. Among other things, it sold off more land, canceled a bonus plan for its officers, and managed to book an extraordinary gain of $2 million from swapping common stock for debt. And its mortgage subsidiary, U.S. Home Mortgage Corp., generated a profit of $1.4 million.

The tonic got stronger

As recently as 1979, when mortgage interest rates on new houses averaged just over 11% and housing starts totaled 1.7 million, mortgage subsidiaries were apt to make only a modest contribution—anywhere from about 2% to 20%—to the profits of giant builders. But last year as interest rates climbed and house sales slumped, mortgage banking produced between a quarter and a half of net income for some large publicly held companies.

Mortgage banking proved to be even stronger tonic for anemic earnings in the first half of this year (see chart next page). Michigan-based Pulte Home Corp. (1981 revenues: $387 million), with operations in 12 states and Puerto Rico, wrested nearly a third of its shrunken $4.1-



Mortgages to the Rescue

Profits from mortgage operations as percent of total profits

These five big homebuilding enterprises have been bolstered by their mortgage subsidiaries in the last couple of years. That has been a common pattern among big builders, whose profits from house sales are badly depressed. Weyerhaeuser Real Estate does not report net profits (only pretax); the chart percentages for that company are based on FORTUNE estimates. At U.S. Home, Pulte, and American Continental, results for the first half of this year included unusual income bulges, and these required judgment calls in the calculation of chart figures. In all three instances, FORTUNE treated the special income so as to understate, rather than overstate, the mortgage subsidiary's contribution to overall net.

million net profit from mortgage finance. Phoenix's American Continental Corp. (1981 revenues: $302 million), which sells some 60% of its new houses in Colorado and another 30% in Arizona, earned 42% of its profit from mortgages. The Maryland-based Ryland Group ($231 million), which added mortgages to its activities only four years ago, earned 29% of its first-half net from that source.

The reward of mortgage operations was even more dramatic for another housing giant, Pittsburgh-based Ryan Homes Inc. (1981 revenues: $381 million). Ryan lost $538,000 in the first half of 1982, but the deficit would have been a lot larger without the $1.9-million profit of subsidiary Ryan Financial Services. "We wouldn't have survived very well without it," observes Malcolm Prine, chairman and chief executive of Ryan Homes.

Fat was attractive

All ten of the nation's largest builders of houses have mortgage subsidiaries. So do at least another 16 among the 56 companies with $100 million or more in annual revenues from houses, mobile homes, apartments, and prefabricated housing (known in the trade as manufactured housing).

Most of the housing giants branched into mortgage banking about a decade ago, not primarily to make money on mortgage operations but to help sell houses. Having a mortgage company enabled them to offer their customers faster loan decisions or better access to money in parts of the U.S. where there were only a few local lenders. Once solidly established, most mortgage companies found that profits came easily in those days. According to one veteran mortgage executive, the companies often made 18% on equity in good years, 12% on average, and 6% even in bad years.

As might be expected, fat profits attracted new entrants. Back in the Sixties, before the influx of homebuilders and other newcomers, most mortgage bankers were independent businessmen, but today only 22 are left among the nation's 100 largest mortgage concerns. Commercial banks and bank holding companies have been so busy acquiring mortgage companies in recent years that they now own 48 of the top 100. In addition, Sears Roebuck owns two and industrial corporations six. One notable industrial owner is Weyerhaeuser, the big timber company. Its subsidiary Weyerhaeuser Real Estate Co. owns nine homebuilders as well as Weyerhaeuser Mortgage Co. The mortgage outfit is the nation's second largest, with a $7.8-billion portfolio after recently acquiring most of the single-family mortgages of Mason-McDuffie Co., a California real estate firm.

The increasing competition generated by this influx of big companies is part of an enormous upheaval that has transformed the once staid and simple mortgage banking business into a complicated sector of high finance. Managers must cope with the array of variable-rate, graduated-payment, and shared-appreciation mortgages that have partly replaced long-term fixed-rate loans. Wall Street investment houses have moved into the business as underwriters of mortgage-backed securities and, in some cases, as owners of mortgage companies. Eli Broad, chairman of Los Angeles-based Kaufman & Broad, No. 9 in homebuilding, observes that mortgage banking "is becoming a money-trading operation, with Salomon Brothers in the thick of it rather than the old-school type of mortgage banker."

Where the profit comes from

The intricacies of dealing with new kinds of loans and new ways of selling them to institutional investors leave little room nowadays for the plodding managers for which mortgage banking was once famous. An executive smart enough and

continued

Research associate: Sue Zelony

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knowledgeable enough to run a mortgage subsidiary well can command an annual salary of $75,000 to $125,000. A few are paid more. Even with a bare-bones staff of six or seven, plus rent and utilities, it is likely to cost at least $500,000 a year to run a minimum-sized mortgage operation. Accordingly, mortgage subsidiaries are uncommon among smaller homebuilders—there would not be enough loan volume to produce an adequate return.

Putting loans on the books is not the profit-laden part of the business. Most mortgage companies lose money on originations, as they are called, because the costs exceed the normal fee, 1% of the loan. Builders have two cost advantages: they need no marketing to drum up mortgage business, and the salesperson who sells a house can fill out a mortgage application at the same time. Some builders say they pay the overhead with originations.

The steady and reliable profit, though, comes from servicing—collecting those monthly payments and dealing with delinquent borrowers. The prevailing fee is ⅜ of 1% per year of the declining balance of the mortgage loan. Because of their overhead costs, most mortgage companies do not reap substantial profits until their portfolio of loans being serviced passes about $200 million.

The record of Pulte Home's ICM Mortgage Corp. illustrates the profit buildup. In 1977, with a portfolio of $80 million and mortgage originations of $76 million, ICM netted a mere $244,700. By 1979, with servicing up to $377 million and originations of $221 million, profits came to $679,000. Last year servicing reached $836 million and originations $296 million; profits leaped to $4.49 million.

At that size a mortgage arm becomes a strong buttress for a builder's main business. He has access to more sources of mortgage funds, and the size of his mortgage company enables him to borrow money in big chunks on Wall Street for as much as 100 basis points less than a small builder might be able to arrange for his customers from a local bank or savings and loan. In July, for example, when the average rate on conventional mortgages was 17.2%, Ryan Homes floated a $20.9-million bond issue at 16%.

Builders can use the spread to fatten their profit margins or, as many have been doing, to subsidize mortgages for their customers by giving them below-market rates. All forms of these "buy downs" are costly. Last year U.S. Home spent $80 million—nearly 9% of its revenues and nearly eight times its net profits—to subsidize mortgage loans in an effort to maintain its front-ranking share of the market.

The biggest and most important change in mortgage banking, especially for homebuilders, is the emergence of the bond market as the No. 1 source of mortgage money. Federal Reserve figures show that 42% of the new money for home mortgages came from the bond market during the first quarter of this year, compared with only 7% in 1977. Savings and loan associations, the historic leader, were so crippled by losses that they provided only 8.6% of the first-quarter total.

Help from a split

Builders tried from the mid-Fifties on to devise a way to convert mortgages into securities acceptable to bond buyers. Their efforts finally succeeded after the 1968 Housing Act split the government's Federal National Mortgage Association into two parts. FNMA, better known as Fannie Mae, was rechartered as a privately owned

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but partly government-supervised corporation. Its main role is to help level the swings in the availability of mortgage credit by buying (or selling) mortgages on a gigantic scale in the secondary, or resale, market. The other half of the old organization became the Government National Mortgage Association (Ginnie Mae), an agency of the Department of Housing and Urban Development. Ginnie took over Fannie Mae's former job of making mortgage loans with Treasury money for HUD's subsidized housing programs. The law also gave Ginnie Mae a new device to snare private capital for both subsidized and unsubsidized FHA and VA loans. By stamping on her guarantee, Ginnie places the full faith and credit of the government behind securities backed by pools of FHA and VA mortgages.

Ginnie Mae issues, which carry an AAA Standard & Poor's credit rating thanks to their federal guarantee, have unlocked the door to the bond market for a broad array of mortgage-backed securities. First issued in 1970, GNMAs now aggregate nearly $136 billion. In addition, some $46 billion of securities backed by conventional mortgages have been issued by the Federal Home Loan Mortgage Corp., nicknamed Freddie Mac. Besides all that, banks, savings and loans, mortgage bankers, and homebuilders have floated more than $5 billion worth of similar paper by dealing directly with bond underwriters.

"They went to school on us"

Though there are numerous variants, mortgage-backed securities come in two basic types. One provides ownership in a pool of mortgage loans. The second is a bond secured by a pledged pool of mortgages. For builders, the difference is crucial. By issuing the second type, generally through a subsidiary shell formed for the purpose, they usually retain legal ownership of the underlying mortgage loans. If so, the proceeds of the bond issue may qualify for income tax purposes as an installment sale—instead of an outright sale—and that shelters a large portion of those funds from immediate taxation. Taxes come due only gradually, as amortization reduces the outstanding principal of the mortgage loans. Kenneth Leventhal & Co., a Los Angeles accounting firm that specializes in financial innovation in real estate (see "Architects of Exotic Mortgages," FORTUNE, December 29, 1980), figures that a builder big enough to float $95 million of mortgage-backed bonds might be able to shelter $7.5 million of a $10-million taxable gain. No wonder several big builders have issued mortgage-backed bonds this year, copying the technique from one another. Says Robert Horner, a senior vice president at Pulte: "Ryan's recent $20-million issue with Smith Barney is almost a duplicate of ours. They went to school on us. But that's all right. We went to school on another company."

U.S. Home and Pulte have been able to sell mortgage-backed bonds at lower interest rates than those prevailing on Wall Street by marketing through regional underwriters. Pulte, for instance, floated a 30-year issue of GNMA collateralized bonds in July at 14%. The bonds are sold in minimum packages of $1,000, aiming at individual purchasers such as owners of small businesses rather than institutions able to buy in $25,000 blocks, the minimum for most securities underwritten by big Wall Street investment houses.

Smaller builders, too, are trying to float mortgage-backed bonds. They expect to act in groups, some of them coached by

continued

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The effects of TIM would be far from tiny.

Leventhal & Co., to amass big enough packages of mortgages to qualify for the big time. Wall Street underwriters consider $40 million the minimum for a successful public offering to large investors, chief among them the long-sought pension funds with their $780 billion of assets.

The Reagan Administration is at work on a plan that could greatly expand the market for securities backed by conventional mortgages. Congress will be asked to authorize creation of Trusts for Investment in Mortgages. With a TIM, a lender will be able to pool any residential first mortgages as underpinning for investment-grade securities, provided they are registered with the Securities and Exchange Commission or meet the criteria of the Home Loan Bank Board. Just as important, the legislation, if enacted, will clear away legal underbrush that hampers sales of mortgage-backed paper other than that of federal agencies.

Big is better

Whatever comes of TIM, the institutional upheaval in mortgage banking seems certain to endure. To obtain loans for their customers at the lowest possible interest rates, builders will have to be more and more involved in mortgage activity—alone if they are big, in concert if they are small. A well-regarded authority in this matter is Barbara T. Alexander, a Smith Barney vice president and analyst who first alerted the financial community to the new role of mortgage subsidiaries in lifting big-builder profits. Alexander contends that mortgage operations will prove even more helpful to big outfits if home sales rebound. Her view finds considerable support among builders.

For several years large-scale builders have gradually been increasing their share of the total market at the expense of smaller rivals. Given superior access to money along with cost savings from bulk purchasing and quick construction, Alexander reasons, big companies will be able to extend their market-share gains. If so, they will be able to increase their sales dramatically in a housing recovery. F

LOBBIES

Washington in the Grip

# of the Green Giant

Business's push for environmental deregulation is suddenly going nowhere.

by WILLIAM SYMONDS

Since President Reagan and the first Republican-controlled Senate in a generation took power in Washington, many of the liberal ideas and programs that flourished in the Sixties and Seventies have faltered. One that hasn't is the environmental movement, which has not only hung on to its public support but become so much stronger and more sophisticated that it deserves being ranked with the National Rifle Association and the right-to-life movement as a superlobby.

More than a dozen major environmental groups—backed up by scores of lesser ones—now roam the corridors of power in Washington. Their professional staffs number in the hundreds, and like the New Right they have become experts at using direct mail to raise money and generate grass-roots pressure on Washington from a highly motivated mass membership that exceeds five million. As a result, efforts by the Administration and business to reform environmental laws have been stopped dead in their tracks.

Gathered in the Washington headquarters of the National Wildlife Federation are top officials of most of the 14 groups that are the core of the environmental lobby. Front row, from left: Michael Bean, senior attorney, Environmental Defense Fund; Brock Evans, vice president for national issues, National Audubon Society; Charles Clusen, conservation director, Wilderness Society. In rear, from left: John R. Lorenz, executive director, Izaak Walton League of America; Elizabeth Davenport, coordinator, Environmental Action; Richard Munson, director, Solar Lobby; Jay D. Hair, executive vice president, National Wildlife Federation; John McComb, director, Washington office, Sierra Club; Paul Pritchard, president, National Parks & Conservation Association; Louise Dunlap, president, Environmental Policy Center.

The environmentalists' rise to superlobby status has gone largely unnoticed; their recent achievements have been written off as a passing reaction to Reagan's controversial Secretary of the Interior, James Watt. In truth, the lobby played a big role in shaping Watt's negative image and so in generating the reaction to him that has fueled its victories in Congress, which have been little short of sensational:

- Both the House and Senate recently extended the Endangered Species Act for three years without any significant changes. This is the law that in the late Seventies blocked completion of the Tellico Dam in Tennessee for two years to protect an obscure fish called the snail darter. It had been ridiculed as the ultimate example of environmental extremism, and even environmentalists expected it might be weakened when it came up for review this year. Then the green lobby organized a committee of several thousand scientists to educate Congress about protecting species, and a strong reauthorization sailed through both chambers on a voice vote.
- After Watt tried to permit some oil and gas leasing in wilderness areas, environmentalists stirred up such a ruckus that, as a compromise, he proposed a bill that would bar such leasing until the year 2000. In August the House instead voted by a 6-to-1 margin for an environmentalist-backed bill to prohibit oil, gas, and some mineral leasing in wilderness areas forever. The environmentalists put on such "an intensive effort in terms of personal contact and mail," says an oil industry lobbyist who opposed the House bill, that "every time we were on the Hill we would find their tracks."
- The environmentalists' National Clean Air Coalition has all but dashed the hopes of the Reagan Administration and many business executives that Congress would make major changes in the Clean Air Act. Recently the Senate Environment and Public Works Committee voted 15 to 1 to report out a tough clean air bill. John Quarles, the former EPA deputy administrator who is now head of a major industry and labor coalition working for change, characterizes the bill as "unacceptable to industry—and totally unacceptable to the auto, utility, and mining industries."

Frustration at the Roundtable

Business lobbyists concede that the environmentalists "have been very effective in promoting their cause," as Quarles puts it. But they complain that the green lobby's tactics—especially its skillful use of the press—have distracted attention from the need to devise more efficient, less costly ways of meeting environmental objectives. Businessmen's frustration was captured in a May 7 mailgram on the Clean Air Act sent to members of the Business Roundtable by U.S. Steel Chairman David Roderick, who heads the Roundtable's environment task force. "Despite past efforts, we have failed . . . to offset the work of the environmental community," Roderick wrote. He warned that if business doesn't press its views more effectively, "it is possible that the environmental community will have earned a highly publicized and stunning victory that could frustrate regulatory reform efforts for the balance of this Administration."

The emergence of an environmental lobby capable of engineering such upsets is a relatively recent development. Fifteen years ago the environmental movement consisted mainly of hunters, fishermen, bird-watchers, and other outdoor enthusiasts interested primarily in national parks, wildlife refuges, and other matters directly affecting their sporting interests.

In the late Sixties and early Seventies, this movement was transformed by the explosion of public interest in pollution

Photograph by Neal Slavin

and man's use and abuse of nature. A lot of new environmental groups were organized and the lobby expanded its focus to embrace "almost all of society's and nature's activities—from the fate of the desert pupfish to that of an interstate highway, from soil erosion to the sonic boom," according to Rice Odell, an editor at the Conservation Foundation.

After a period in the mid- and late Seventies when the movement's growth slowed, the green lobby took off again. Except for the Izaak Walton League, the National Parks & Conservation Association, and the Wilderness Society, all of the groups that form the inner club of the environmental lobby are substantially larger now than they were in 1970. The National Audubon Society has more than doubled over this period, the Sierra Club has almost tripled, and the National Wildlife Federation has added 250,000 associate members. Many smaller groups have gone from practically zero to 30,000 to 50,000 members over this period.

Today, these groups' total membership of more than five million members, though well under the ten-million-plus members claimed by the National Right to Life Committee, makes the environmentalists an imposing force. By comparison, the National Rifle Association has 2.4 million members and the National Organization for Women a mere 214,000.

Blue-collar greens

The members of most of these groups tend to be better educated and more affluent than the average American. A recent survey of Sierra Club members found that they have a mean income of $38,000 and that almost 40 percent have a graduate degree. On the other hand, the more than one million affiliate members of the National Wildlife Federation are "definitely blue-collar types," according to a Federation spokesman. Though low-income and minority groups are underrepresented, the movement cuts across a fairly broad swath of American society.

The environmental lobby's resources in Washington have also grown enormously. In the late Sixties there were only two or three registered environmental lobbyists on the Hill. Today there are over 80.

As the staffs have grown, they have also become more professional. Together, the Natural Resources Defense Council, the Environmental Defense Fund, the National Wildlife Federation, and the Sierra Club Legal Defense Fund employ about 50 lawyers. Many of NRDC's lawyers went to Harvard or Yale law schools, and all of the 14 lawyers working for the Environmental Defense Fund were on law review. Most were also first in their law school classes.

Environmental groups are making increasing use of computers to quickly target those most likely to help out with a phone call or letter to a key Congressman on the eve of an important vote. The Sierra Club first started using computers in this way during the fight for the Alaska Lands Act in the late Seventies; the Audubon Society and others are more recent converts. William Butler, current director of the Audubon Society's Washington office, recalls that as recently as two years ago,"there were only four or five full-time employees in this office, and people were hand-addressing letters." Now Audubon has a Washington staff of 20, including 13 professionals, and its office boasts word-processing equipment and a computer bank containing the names of more than 50,000 members who have expressed interest in getting involved.

Along with this expansion has come a sharply increased commitment to lobbying. Audubon's Brock Evans, who used to work for the Sierra Club, recalls that in the early Seventies "it was hard to get Audubon or the National Wildlife Federation actively involved" in major fights. By contrast, last year Audubon sent out a letter announcing that it was "entering a battle" with the federal government to prevent "the irrevocable destruction of much of America's natural heritage." The letter brought in almost $1 million in contributions—about ten times more than earlier fund-raising appeals had generated.

The greening of the Audubon Society and the National Wildlife Federation has been accompanied by a dramatic change in the ability of the various environmental groups to work together. In the early Seventies "there was a lot of turf fighting and some of the heads of the different groups couldn't work together," says Louise Dunlap, head of the Environmental Policy Center. But many of the groups have appointed new leadership in recent years, and since Reagan took office, Dunlap says, "the leaders have made a special effort to work together." For the past two years the heads of ten key environmental groups have been getting together about once a quarter to discuss common problems and strategies.

Killing Clinch River

This ability to cooperate is apparent in the environmentalists' extensive use of coalitions that include non-environmental groups. The most impressive example to date—and the effort that perhaps best demonstrated that the environmentalists had become a superlobby—was the campaign they waged in the late Seventies to preserve millions of acres of Alaskan wilderness. By 1980, when the effort succeeded, environmentalists had attracted more than 50 groups into the Alaska Coalition and built a network of thousands of volunteers around the country.

A similar approach is being taken by the Clean Air Coalition, which includes the American Lung Association, the League of Women Voters, the United Steelworkers of America, and the National Urban League. Meanwhile, environmental groups have been working with the conservative National Taxpayers Union and several church groups and unions to kill the Clinch River breeder reactor. That effort has been going so well that a lobbyist for the Taxpayers Union says, "We absolutely expect to defeat it this year."

The impact of the environmental lobby has been greatly magnified by the public's continued support for environmental protection. Pollster Louis Harris noted last fall that in 1967 the public opposed—by 46% to 44%—paying just $15 more per year in federal taxes to finance efforts to fight air

WHO'S WHO IN THE GREEN LOBBY

Group Headquarters	Founded	1982 Budget (millions)	Members	
MASS ORGANIZATIONS				
National Wildlife Federation Washington	1936	$37.1	4,200,000	Mainly hunters and fishermen. With recent sharp criticism of James Watt, it has broken from traditionally conservative posture.
National Audubon Society New York	1905	$22.0	470,000	Onetime bird-watchers now keep eagle eye on all outdoors under Russ Peterson, ex-head of U.S. Council on Environmental Quality.
Sierra Club San Francisco	1892	$13.0	311,000	Most activist big group—also the oldest. Works on local as well as national issues. Membership chiefly western, liberal, and Democratic.
LITIGATORS				
Natural Resources Defense Council New York	1970	$4.5	40,000	Founded by lawyers. Lobbies as well as litigates. A staffer chairs National Clean Air Coalition.
Environmental Defense Fund New York	1967	$2.8	50,000	Produces scientific and economic analysis for litigating and lobbying on local and national levels.
GENERALISTS				
Friends of the Earth San Francisco	1969	$1.3	30,000	A Sierra Club spin-off. Aggressively anti-nuclear. Has led fight against Clinch River breeder reactor.
Environmental Policy Center Washington	1972	$1.1	—	Has more registered lobbyists (19) than any other environmental group in Washington.
SPECIALISTS				
The Wilderness Society Washington	1935	$3.6	68,000	Focuses on public-lands issues, making a specialty of Alaska. Is branching out into economic analysis.
Defenders of Wildlife Washington	1925	$2.3	56,000	Works to protect endangered species. Often opposes hunting.
Solar Lobby Washington	1978	$1.0	53,000	For tax incentives to conserve energy. Promotes use of renewable energy.
The Izaak Walton League of America Arlington, Va.	1922	$1.3	50,000	A fishermen's organization, it now concentrates on broad water and public-lands issues.
National Parks & Conservation Assoc. Washington	1919	$1.3	35,000	Has refocused efforts on establishing local citizen groups to support parks.
Environmental Action Washington	1970	$0.7	25,000	Sponsored Earth Day 1970, 1980. Its annual "filthy five" campaign vilifies alleged corporate polluters.
POLITICOS				
League of Conservation Voters Washington	1970	$0.9	30,000	The green lobby's PAC, it is spending $450,000 on conservation-minded candidates this year.

The environmental lobby is like a club, and these 14 groups are its members. The many "animal groups," such as the Whale Center, aren't included, and neither are non-lobbying research organizations like the Conservation Foundation. The National Wildlife Federation's membership includes contributors and magazine subscribers as well as dues-paying members. Budgets include funds for activities like magazine publishing, which are often substantial.

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more than ONE MILLION Americans know Watt's

Nothing has exercised environmentalists more lately than Ronald Reagan's Interior Secretary, James Watt. Last October the Sierra Club presented Congress with a petition for Watt's removal that was signed by 1.1 million people.

Terry Ashe

and water pollution. By 1971, however, "Americans listed pollution control as a national problem second only to the state of the economy." This public support hasn't faded as Americans have learned how expensive clean-up programs can be. Instead, according to a survey conducted by the Roper Organization last September, only 21% of Americans "think environmental protection laws and regulations have gone too far," while 69% say they are about right or haven't gone far enough.

Equally impressive is the breadth of this support. The Roper survey found that no more than 30% of any major group—including Republicans, conservatives, poor people, blacks, and Westerners—felt that "environmental protection laws and regulations have gone too far."

The environmental lobby has been able to capitalize on the support for environmental protection by skillfully using the press. For example, when Democratic Representative Thomas Luken of Ohio and five other House members introduced a series of industry-supported amendments to the Clean Air Act last December, they claimed their bill would reduce the cost and complexity of the act, while "maintaining a strong federal commitment to environmental protection." But these claims were quickly overwhelmed by the Clean Air Coalition's charge that the amendments were "a dirty-air Christmas present for the nation."

Blowing smoke over CO emissions

These tactics have distorted the public's perception of what is at stake in some of the individual amendments. One such amendment, sought by the auto industry, would have changed the standard for carbon monoxide emissions from the current 3.4 grams per mile to 7 grams per mile, which was the standard 1980-model-year cars had to meet. Such a change was recommended by the bipartisan National Commission on Air Quality—which concluded it would not hurt efforts to clean up the nation's air by 1990. General Motors calculates that it could save $60 on every car if the change were adopted; applied industry-wide, these savings would amount to hundreds of millions of dollars a year.

Days before the Senate Environment Committee was to consider this amendment, the Clean Air Coalition unveiled a study that concluded that if the CO standard were changed, "at least 16 major metropolitan areas containing over 40 million people may never meet the public health standard for CO." One of those areas was Albuquerque, New Mexico. The next morning there were banner headlines in Albuquerque warning that the city would never achieve clean air if the CO standard were lowered. The tactic worked: Republican Senator Pete Domenici of New Mexico, a key swing vote, asked that the committee postpone the vote on the standard.

The committee's staff later took a close look at the Clean Air Coalition's study and found that it had merely used more pessimistic assumptions than those used by the National Commission on Air Quality. Though this doesn't prove the coalition's study was inaccurate, it does show how much uncertainty bedevils efforts to project what a 7-gram vs. a 3.4-gram standard would mean for air quality in future years. But this uncertainty—as well as the question of whether the nation should pay hundreds of millions of dollars for the benefits, whatever they might be, of a 3.4-

continued

"We are trying to grope for a new strategy, but we honestly don't have one now," says one business lobbyist.

gram CO standard—was never really communicated to the public. Nor did the general public understand that even with a 7-gram standard, CO levels would continue to fall sharply as Americans traded in older cars that emit far more than 7 grams of CO per mile. Instead, the public was left with the impression that Detroit wanted to sacrifice the goal of clean air by "doubling" the CO standard. As an auto industry lobbyist admits, "The Clean Air Coalition has made very effective political use of these numbers."

The green lobby's clout on Capitol Hill has been so awesome that the Reagan Administration backed away from proposing bills that would make major changes in the Clean Air and Endangered Species acts. But the lobby claims to have had substantially less success in persuading the Administration to adopt its agenda in other areas, especially on public-lands issues and the enforcement of environmental laws. Says Wilderness Society Chairman (and former Senator) Gaylord Nelson: "We are witnessing a wholesale dismantling of the environmental achievements and gains of the past decade and a half. It is being done by a series of executive and administrative actions, without review by Congress, and beyond the view of the American people."

The National Wildlife Federation campaigned successfully to have 1982 declared the year of the eagle. As part of this effort, Senator David Durenberger, a Minnesota Republican, is shown a bald eagle that was nursed back to health by a team of St. Paul veterinarians.

Terry Ashe

"Boy, did we miscalculate"

That kind of rhetoric has served as a launching platform for the most aggressive environmental campaign ever—the effort to get Reagan to fire Watt, which has broadened into an unprecedented across-the-board attack on the Administration as a whole. Meanwhile, environmentalists are gearing up for the largest push in their history to elect friendly candidates to Congress. The League of Conservation Voters—by far the largest of the five environmental political action committees—plans to back about 70 candidates this fall with a budget of close to $900,000, twice what it had for the 1980 elections. It will also deploy hundreds of enthusiastic campaign workers. Marion Edey, League director, admits that environmental issues play a minor role in many races. But she says, "The environmental movement has only just begun to tap its political potential."

At this point, most business lobbyists are still recovering from their surprise at how well the environmentalists have been doing. "We honestly thought the debate on the Clean Air Act would be less emotional than it was," admits Albert Fry, the lead Clean Air lobbyist for the Business Roundtable. Adds Harvey Alter, a U.S. Chamber of Commerce staffer: "We were blind-sided by an emotional and dishonest attack on any proposal for change. Boy, did we miscalculate."

Some business lobbyists put part of the blame on the Administration. "There is no question that Jim Watt set back progress with some of the statements he made," says John Quarles. All agree that the environmentalists didn't help by, as Alter puts it, "viewing everything we proposed as the biggest threat since Attila the Hun."

But business lobbyists have no very clear ideas about what to do next. "We are trying to grope for a new strategy," says the Roundtable's Fry, "but we honestly don't have one now." Alter is more caustic: "I haven't heard one good idea for anything that can be done in the short term—that is, in time for the next Congress."

There is, however, a general belief that business must learn how to communicate its proposals better. That means, according to Quarles, that businessmen need a "much stronger commitment to genuine public education" regarding the problems and excesses of current environmental regulation, and how to correct them while still meeting basic environmental goals. American Mining Congress President J. Allen Overton Jr. says: "If business is to educate the public about responsible environmentalism, it has to begin with a dialogue with the media, because the media must accept blame for much of the distortion in the people's present perception."

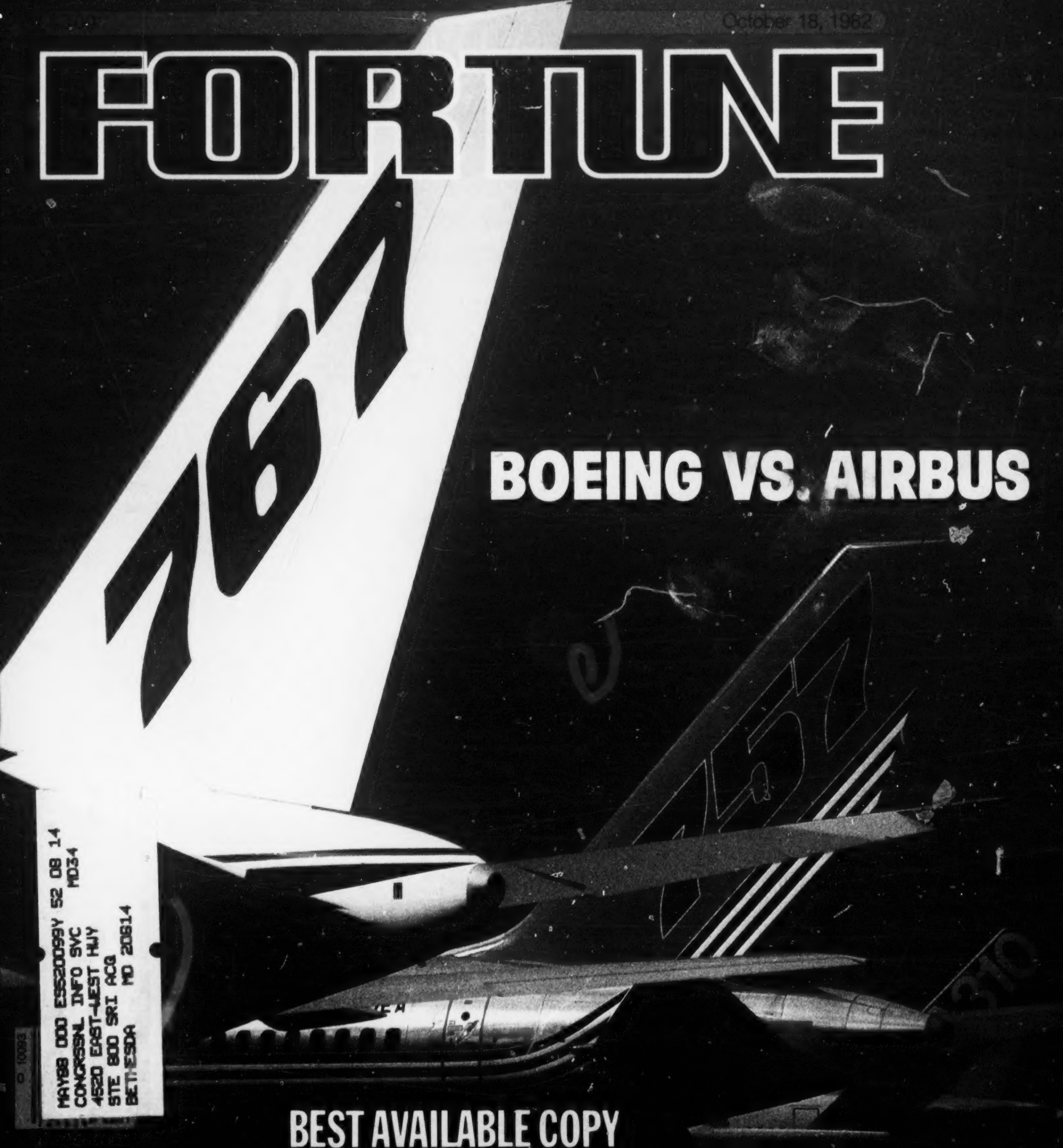
Thus, as Quarles concludes: "Business does have a dilemma." If it fights the new green giant, it is apt not only to lose, but to harm its cause in the process. If it does nothing, it stands to gain nothing. The dilemma is made worse by the fact that the environmentalists are in no mood to be merciful. They are almost as surprised and impressed as are businessmen by the green lobby's new power.

Behind the Lines in the Bendix War

Bob Dole Wants to Raise Your Taxes Again

October 18, 1982

FORTUNE



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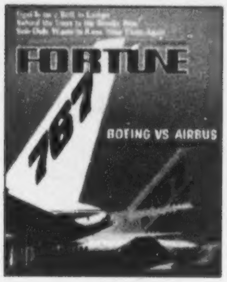

The middleweight contenders for the world aircraft market—Boeing's 757 and 767 and Airbus Industrie's A310—were photographed at the Farnborough Air Show in England by Ian Berry of Magnum. Articles on pages 114 and 121 appraise the combatants' strengths and weaknesses.

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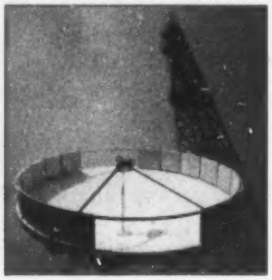
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TAXES

The Administration's battle to raise revenues has alienated some of its staunchest allies.

Taxing the Business Lobby's Loyalty

by RICHARD I. KIRKLAND JR.

If Ronald Reagan, like Bob Dole, decides that federal revenues need enhancing again next year, he'd better not count on a lot of business support. Contrary to Administration claims, when Reagan switched from tax cutting to revenue raising this summer, most of his business allies from previous legislative battles also switched—from support to opposition or sullen silence. Any renewed drive for higher taxes could make the sullen less silent and the opposition more effective.

Last year the business lobbyists massed behind the President's tax cuts numbered more than 500 and had to hold their meetings in the cavernous Hall of Flags at the U.S. Chamber of Commerce. This year the lobbyists supporting the call for $98 billion in tax increases barely exceeded 100 and fit quite comfortably into the boardroom of the National Association of Home Builders. Even the minority who backed the President's proposals didn't have much to say for them. "Everybody," asserts the head of one large trade association, "thought this was a bad bill."

The businesses that did organize on behalf of raising taxes—a coalition wryly tabbed the Deficit Reduction Action Group (DRAG)—were drawn together by John Albertine, president of the American Business Conference, a group of 85 medium-size high-growth companies. The name DRAG was Albertine's idea. A strong advocate of last year's tax cuts, Albertine justifies his support for this year's takeback as a matter of politics rather than sound economics. "In terms of substantive economics," he says, "there's no good justification for this bill. This is simply castor oil that had to be taken to persuade moderate and liberal Democrats to vote for the spending reductions we really need to bring interest rates down." Albertine also candidly admits that since his member companies gained relatively less than many big, capital-intensive companies from last year's tax bill, they had relatively less to lose from this one.

Aware of what they were up against, the strategists at the White House decided to focus their business lobbying on silencing potential opponents rather than on winning friends. Says Wayne Valis, the White House point man for business liaison: "Neutralizing the opposition was our top priority." In pursuit of that goal, aides say, President Reagan made around 30 phone calls and held private audiences with businessmen who represented "the real hard-core opposition." Paul Thayer, head of LTV and chairman of the 260,000-member U.S. Chamber of Commerce, came in for special attention because the Chamber was the most vocal center of business resistance. To undercut it, the White House issued urgent appeals to the officers and members of some 1,200 state and local chambers, asking them to support Ronald Reagan and ignore the calls to opposition coming from Chamber President Richard Lesher and his Washington staff.

Lots of pulled punches

Such tactics paid off. Although only 30-odd local chambers came over to the President's side, many more remained mum. Thayer, with strong White House assistance, managed to convince 32 of the 61 board members to back Reagan rather than Lesher.

The only other trade associations willing to break publicly with the Reagan Administration—the National Federation of Independent Business, the American Farm Bureau Federation, the National Association of Wholesaler-Distributors—were unwilling to offer much more than token resistance to new taxes. Their normally powerful grass-roots lobbying machines barely sputtered. "We never got to our whirling-dervish stage," admits Dirk Van Dongen, president of the wholesalers' association. Exults Wayne Valis: "We got lots of guys to pull their punches."

Straightforward dealmaking kept some businesses quiet. "Our hearts were with Jack Kemp on this," says William Anderson, chief lobbyist for the Independent Petroleum Association. But in exchange for a provision exempting independent oilmen from new taxes on oil, the IPA followed its head rather than its heart and stifled its objections to the bill.

Other deals even converted some abstainers into active advocates. The Direct Selling Association and its members—door-to-door purveyors of plastic kitchenware, encyclopedias, and cosmetics—backed the bill because it clarified their cherished status as "independent contractors." The Internal Revenue Service had been arguing that many such salesfolk were actually company employees and that thus their suppliers should pay Social Security and unemployment taxes. By not increasing excise taxes on hard liquor or imposing new oil import fees, the Administration also convinced the Distilled Spir-

continued

Research associate: Monci Jo Williams

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WHO GOT HIT HOW HARD
EFFECTIVE TAX RATES IN 1986 ON RETURNS FROM NEW INVESTMENT

	1982 LAW	1981 LAW	1980 LAW
SERVICES AND TRADE	40.0%	33.2%	53.1%
UTILITIES	33.4%	20.7%	42.5%
FOOD	26.7%	13.6%	43.5%
MACHINERY	25.7%	10.6%	38.2%
AGRICULTURE	22.5%	5.9%	31.7%
COMMUNICATIONS	21.4%	-0.2%	38.8%
CHEMICALS	17.7%	-2.4%	28.6%
PRIMARY METALS	15.7%	-1.5%	34.6%
PETROLEUM REFINING	13.0%	-13.2%	35.4%
MINING	12.6%	-24.6%	28.4%
TRANSPORTATION	12.2%	-19.9%	31.0%
PULP AND PAPER	11.8%	-12.2%	28.8%
MOTOR VEHICLES	9.0%	-38.6%	26.0%
ALL INDUSTRIES	28.4%	13.1%	42.2%

The Great Tax Takeback of 1982

Congress giveth and Congress taketh away—with help from the Reagan Administration. The American Council for Capital Formation estimates that when the effects of the 1982 tax act are calculated to 1986, the act negates 57% of the business tax relief granted last year.

The table above summarizes the damage by industry. It shows estimated effective tax rates in 1986 on returns from new investment in plant and equipment. Why 1986? That's when the accelerated depreciation provisions of the 1981 tax act would have become fully effective. The figures were compiled for FORTUNE by the Treasury's Office of Tax Analysis. OTA assumed, among other things, that companies are able to take full advantage of the accelerated depreciation and investment tax credits available to them.

Those minus signs in the 1981 column indicate that a lot of companies would have been able to write off more than the costs of the assets they purchased. This generosity led to a lot of raised eyebrows, and now all the minus signs are gone. Even so, most companies in the industries listed are better off, in tax terms, than they were under the laws in effect at the end of the Carter Administration. Some experts, however, say that when all the multitudinous provisions of the Tax Equity and Fiscal Responsibility Act of 1982 are taken into account, it is possible for some companies to be worse off than if the Reagan Administration had just left things the way they were in 1980. —PHILIP MATTERA

its Council and New England business groups that raising other people's taxes was a good idea.

Harder to explain is the capitulation of some big winners from last year's tax cuts—capital-intensive companies like GM, Ford, Chrysler, Westinghouse, Armco, Bethlehem Steel, Eastern Air Lines, Greyhound, LTV, and Phillips Petroleum. These firms and their Washington agents—such as tax lobbyists Charls Walker and Ernest Christian—were principal architects of the accelerated-cost-recovery system (ACRS), which speeds up depreciation schedules, and the so-called safe-harbor leasing rules, which allow ailing firms to sell their unused tax breaks. By putting new limits on the investment tax credit, repealing increases in ACRS benefits scheduled for 1985 and 1986, halving the benefits of safe-harbor leasing and then abolishing it altogether as of January 1, 1984, Congress went a long way toward wiping out the value of the tax incentives for capital formation it granted just last summer.

Yet all but two businessmen on the 24-member executive committee of the National Association of Manufacturers supported the President. So did all but a few members of the Business Roundtable's policy committee. Even the American Petroleum Institute, whose members lost part of their intangible drilling deductions and foreign tax credits, overcame "considerable division" and backed the bill.

What's more, several prominent chief executives—Chrysler's Lee Iacocca, GM's Roger Smith, Ford's Phil Caldwell, LTV's Paul Thayer, Goodyear's Charles Pilliod—gave the bill their public blessing days before they knew whether the crucial amendments that they were pushing in the House-Senate conference committee would be included in the final legislation. (They weren't.)

The fear factor

In explaining these defeatist tactics, the executives and lobbyists involved speak of high principle—"the need to support the budget process" or some such. Seldom acknowledged is their deeper reason—fear. Unlike broad-based membership organizations such as the NFIB or the Chamber of Commerce, big corporations and individual chief executives can be made to feel vulnerable—to particularly stringent regulatory or antitrust scrutiny, perhaps, or to loss of a big government contract, even to hostile public opinion. The Administration used this sense of vulnerability. Says a lobbyist: "The White House was telling people they weren't going to get shit the next time they came in if they didn't support the President."

With huge federal budget deficits still looming ahead despite the tax increases, many Washington business lobbyists are already starting to think about what the next round of "tax reform" will look like. In hopes of striking a better deal next time, some lobbyists have begun mapping out a positive proposal for reviving the kind of activism and unity that served them so well in 1981. Jack Albertine reports that the morning after Congress approved the new tax bill, Charls Walker sent him a note suggesting they get together soon "to discuss strategy." In view of what happened to business this year, it hardly seems too soon to start. F